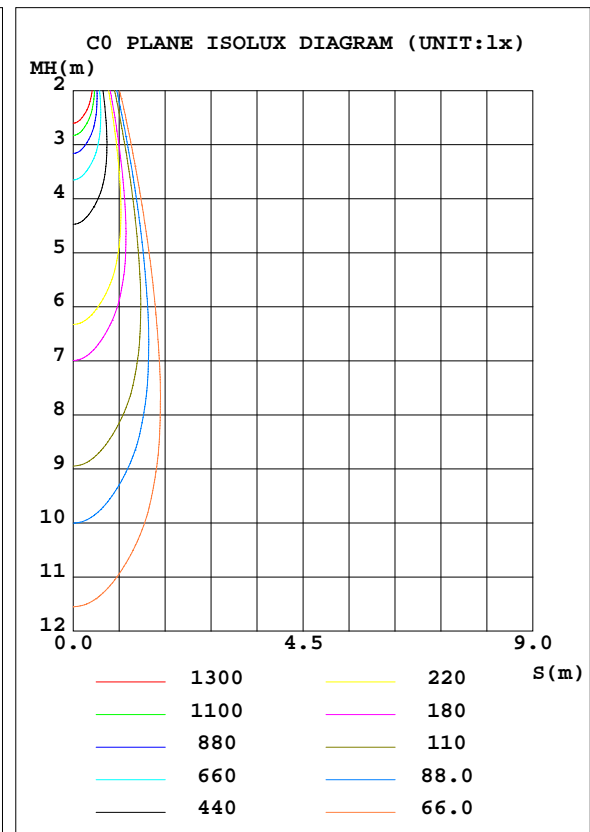
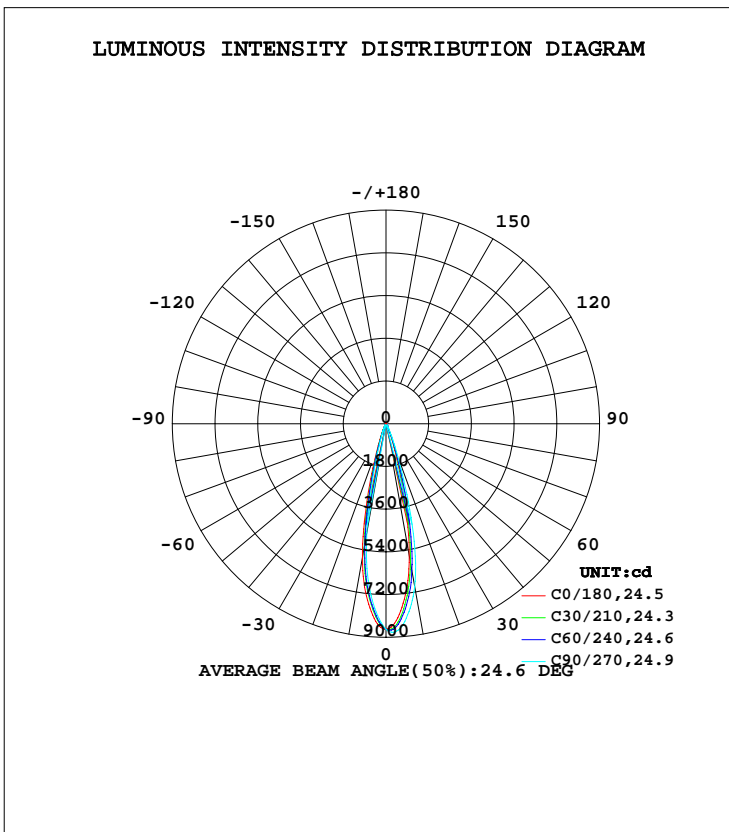


LUMINAIRE PHOTOMETRIC TEST REPORT

| | | |
|--------------------------|----------------------|------------------|
| NAME: VN-TLO020-31 | TYPE:LED TRACK LIGHT | WEIGHT:1 |
| SPEC.:3000K CRI90 25-60D | DIM.: | SERIAL No.: |
| MFR.: 1 | SUR.: | Shielding Angle: |

| DATA OF LAMP | | PHOTOMETRIC DATA Eff: 88.24 lm/W | | | |
|------------------|---------------|---|--------|--------------------|----------|
| MODEL | CLU038-1205C4 | I _{max} (cd) | 8870 | S/MH(C0/180) | 0.39 |
| NOMINAL POWER(W) | 20 | LOR(%) | 100.0 | S/MH(C90/270) | 0.34 |
| RATED VOLTAGE(V) | 120 | TOTAL FLUX(lm) | 1813.0 | η UP, DN(C0-180) | 1.2,57.5 |
| NOMINAL FLUX(lm) | 1813.02 | CIE CLASS | DIRECT | η UP, DN(C180-360) | 1.1,40.2 |
| LAMPS INSIDE | 1 | η up(%) | 2.4 | CIBSE SHR NOM | 0.00 |
| TEST VOLTAGE(V) | 120 | η down(%) | 97.6 | CIBSE SHR MAX | 1.00 |



C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: MEDIUM
 Temperature:23DEG
 Operators:TZH
 Test Date:2018-04-08

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.401
 Humidity:65.0%
 Test Distance:5.300m [K=1.0000]
 Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

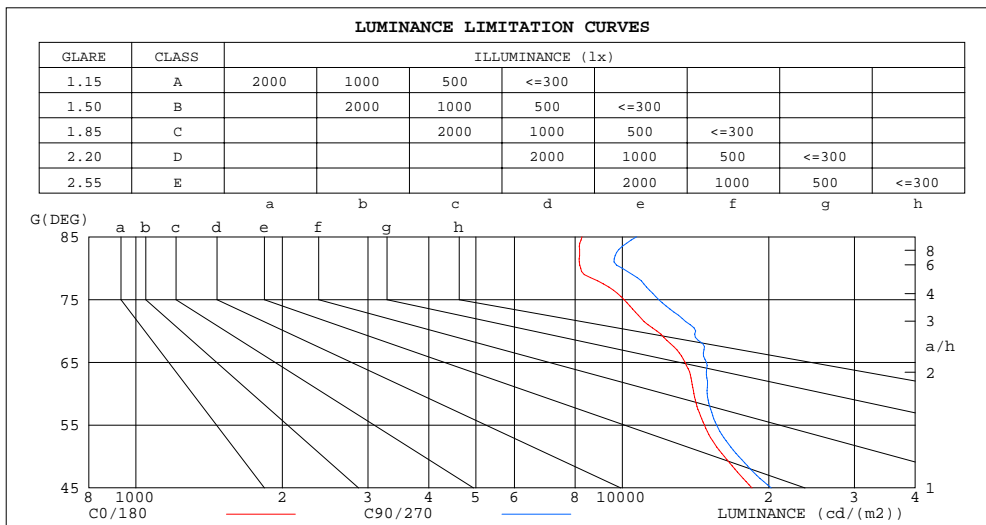
| γ | C0 | C45 | C90 | C135 | C180 | C225 | C270 | C315 | γ | Φ zone | Φ total | lum, lamp |
|-----|-----------------------|--------|--------|--------|--------|--------|--------|--------|---------|---------|---------|-----------|
| 10 | 5662 | 6137 | 6974 | 7076 | 5731 | 5202 | 4666 | 4527 | 0- 10 | 679.4 | 679.4 | 37.5,37.5 |
| 20 | 837.4 | 1064 | 1474 | 1534 | 890.4 | 718.2 | 557.4 | 534.1 | 10- 20 | 774.2 | 1454 | 80.2,80.2 |
| 30 | 138.7 | 164.8 | 202.2 | 208.8 | 148.3 | 127.6 | 106.9 | 103.2 | 20- 30 | 179.1 | 1633 | 90,90 |
| 40 | 51.92 | 55.69 | 61.79 | 61.92 | 53.17 | 50.41 | 47.42 | 46.02 | 30- 40 | 53.59 | 1686 | 93,93 |
| 50 | 31.93 | 32.75 | 35.09 | 36.18 | 32.53 | 30.39 | 29.60 | 29.72 | 40- 50 | 31.89 | 1718 | 94.8,94.8 |
| 60 | 21.51 | 21.68 | 23.50 | 24.36 | 21.83 | 20.41 | 21.23 | 20.77 | 50- 60 | 23.66 | 1742 | 96.1,96.1 |
| 70 | 12.34 | 13.43 | 15.22 | 15.90 | 12.48 | 11.69 | 11.36 | 10.89 | 60- 70 | 17.52 | 1759 | 97,97 |
| 80 | 4.372 | 4.787 | 5.460 | 5.659 | 4.290 | 3.964 | 3.612 | 3.489 | 70- 80 | 8.721 | 1768 | 97.5,97.5 |
| 90 | 0.4526 | 0.5835 | 0.9014 | 0.9653 | 0.4186 | 0.4264 | 0.4630 | 0.4507 | 80- 90 | 2.463 | 1770 | 97.6,97.6 |
| 100 | 0.5772 | 0.5711 | 0.5747 | 0.5420 | 0.6026 | 0.6016 | 0.6301 | 0.6303 | 90-100 | 0.5652 | 1771 | 97.7,97.7 |
| 110 | 0.7727 | 0.7513 | 0.7437 | 0.7176 | 0.7228 | 0.7218 | 0.7514 | 0.7476 | 100-110 | 0.6996 | 1772 | 97.7,97.7 |
| 120 | 1.424 | 1.291 | 1.162 | 1.124 | 0.9693 | 1.035 | 1.154 | 1.171 | 110-120 | 0.8801 | 1773 | 97.8,97.8 |
| 130 | 5.439 | 4.784 | 4.061 | 3.902 | 2.910 | 3.426 | 4.211 | 4.346 | 120-130 | 1.954 | 1775 | 97.9,97.9 |
| 140 | 15.25 | 14.34 | 13.07 | 12.72 | 10.80 | 12.02 | 13.53 | 13.77 | 130-140 | 6.248 | 1781 | 98.2,98.2 |
| 150 | 24.54 | 24.22 | 23.49 | 23.14 | 21.69 | 22.90 | 24.13 | 24.09 | 140-150 | 11.54 | 1792 | 98.9,98.9 |
| 160 | 26.48 | 27.07 | 27.77 | 27.54 | 26.72 | 27.02 | 27.11 | 25.86 | 150-160 | 11.99 | 1804 | 99.5,99.5 |
| 170 | 19.89 | 20.97 | 22.52 | 22.76 | 21.17 | 20.87 | 19.19 | 17.82 | 160-170 | 7.022 | 1811 | 99.9,99.9 |
| 180 | 14.42 | 15.14 | 14.97 | 15.06 | 14.42 | 15.14 | 14.98 | 15.06 | 170-180 | 1.708 | 1813 | 100,100 |
| DEG | LUMINOUS INTENSITY:cd | | | | | | | | | UNIT:lm | | |

C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: MEDIUM
 Temperature:23DEG
 Operators:TZH
 Test Date:2018-04-08

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.401
 Humidity:65.0%
 Test Distance:5.300m [K=1.0000]
 Remarks:

LUMINANCE LIMITATION CURVES

| | | |
|--------------------------|----------------------|------------------|
| NAME: VN-TL0020-31 | TYPE:LED TRACK LIGHT | WEIGHT:1 |
| SPEC.:3000K CRI90 25-60D | DIM.: | SERIAL No.: |
| MFR.: 1 | SUR.: | Shielding Angle: |



| LUMINANCE cd/(m2) | | |
|-------------------|--------|---------|
| G(DEG) | C0/180 | C90/270 |
| 85 | 8263 | 10700 |
| 80 | 8212 | 9994 |
| 75 | 10080 | 11882 |
| 70 | 11772 | 14146 |
| 65 | 13463 | 14891 |
| 60 | 14032 | 14938 |
| 55 | 14747 | 15627 |
| 50 | 16203 | 17349 |
| 45 | 18477 | 20229 |

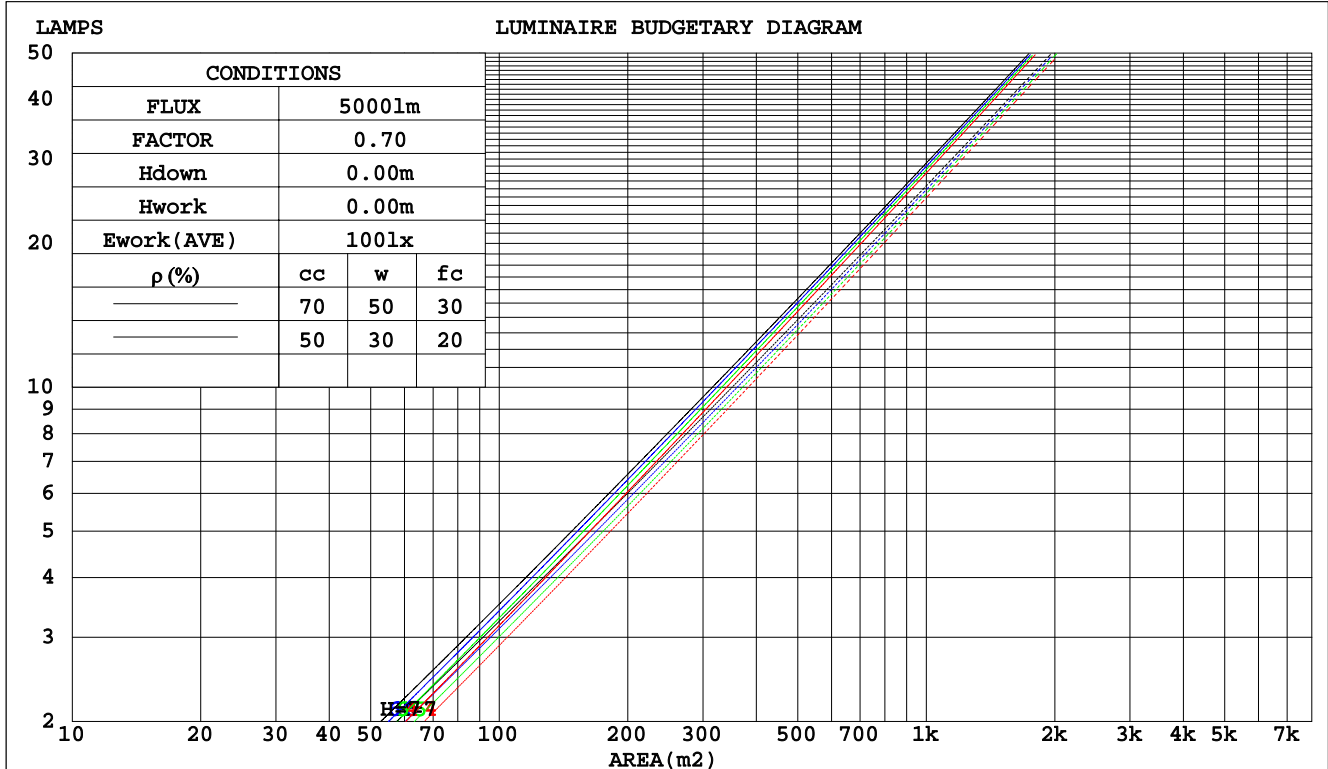
C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: MEDIUM
 Temperature: 23DEG
 Operators: TZH
 Test Date: 2018-04-08

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.401
 Humidity: 65.0%
 Test Distance: 5.300m [K=1.0000]
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

| | | |
|--------------------------|----------------------|------------------|
| NAME: VN-TLO020-31 | TYPE:LED TRACK LIGHT | WEIGHT:1 |
| SPEC.:3000K CRI90 25-60D | DIM.: | SERIAL No.: |
| MFR.: 1 | SUR.: | Shielding Angle: |

| pcc | 80% | | | 70% | | | 50% | | | 30% | | | 10% | | | 0 |
|------|---------------------------------|------|------|------|------|------|------|------|------|------|------|------|-----|-----|-----|-----|
| | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 0 |
| pw | | | | | | | | | | | | | | | | |
| pfc | | | | | | | | | | | | | | | | |
| RCR | RCR:Room Cavity Ratio | | | | | | | | | | | | | | | |
| | Coefficients of Utilization(CU) | | | | | | | | | | | | | | | |
| 0.0 | 1.18 | 1.18 | 1.18 | 1.15 | 1.15 | 1.15 | 1.10 | 1.10 | 1.10 | 1.05 | 1.05 | 1.05 | .00 | .00 | .00 | .98 |
| 1.0 | 1.12 | 1.10 | 1.08 | 1.10 | 1.08 | 1.06 | 1.05 | 1.04 | 1.02 | 1.01 | 1.00 | .99 | .97 | .97 | .96 | .94 |
| 2.0 | 1.06 | 1.03 | 1.00 | 1.04 | 1.02 | .99 | 1.01 | .99 | .97 | .98 | .96 | .94 | .95 | .93 | .92 | .90 |
| 3.0 | 1.02 | .98 | .95 | 1.00 | .97 | .94 | .97 | .94 | .92 | .95 | .92 | .90 | .92 | .90 | .89 | .87 |
| 4.0 | .97 | .93 | .90 | .96 | .92 | .90 | .94 | .91 | .88 | .92 | .89 | .87 | .90 | .88 | .86 | .85 |
| 5.0 | .94 | .90 | .86 | .93 | .89 | .86 | .91 | .88 | .85 | .89 | .86 | .84 | .88 | .85 | .83 | .82 |
| 6.0 | .91 | .86 | .83 | .90 | .86 | .83 | .88 | .85 | .82 | .87 | .84 | .81 | .85 | .83 | .81 | .80 |
| 7.0 | .88 | .83 | .80 | .87 | .83 | .80 | .86 | .82 | .80 | .84 | .81 | .79 | .83 | .81 | .79 | .78 |
| 8.0 | .85 | .81 | .78 | .85 | .81 | .78 | .83 | .80 | .77 | .82 | .79 | .77 | .81 | .79 | .77 | .76 |
| 9.0 | .83 | .79 | .76 | .82 | .78 | .76 | .81 | .78 | .75 | .80 | .77 | .75 | .79 | .77 | .75 | .74 |
| 10.0 | .81 | .76 | .74 | .80 | .76 | .74 | .79 | .76 | .73 | .78 | .75 | .73 | .78 | .75 | .73 | .72 |



C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: MEDIUM
 Temperature:23DEG
 Operators:TZH
 Test Date:2018-04-08

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.401
 Humidity:65.0%
 Test Distance:5.300m [K=1.0000]
 Remarks:

WEC AND CCEC

| | | |
|--------------------------|----------------------|------------------|
| NAME: VN-TLO020-31 | TYPE:LED TRACK LIGHT | WEIGHT:1 |
| SPEC.:3000K CRI90 25-60D | DIM.: | SERIAL No.: |
| MFR.: 1 | SUR.: | Shielding Angle: |

| ρcc | 80% | | | 70% | | | 50% | | | 30% | | | 10% | | | 0 |
|------|-----------------------|------|------|------|------|------|---------------------------------|------|------|------|------|------|------|------|------|---|
| ρw | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 0 |
| ρfc | 20% | | | 20% | | | 20% | | | 20% | | | 20% | | | 0 |
| RCR | RCR:Room Cavity Ratio | | | | | | Wall Exitance Coefficients(WEC) | | | | | | | | | |
| 0.0 | | | | | | | | | | | | | | | | |
| 1.0 | .145 | .083 | .026 | .138 | .079 | .025 | .124 | .071 | .023 | .111 | .064 | .021 | .100 | .058 | .019 | |
| 2.0 | .134 | .073 | .023 | .128 | .070 | .022 | .116 | .065 | .020 | .106 | .059 | .019 | .096 | .054 | .017 | |
| 3.0 | .124 | .066 | .020 | .119 | .064 | .019 | .109 | .059 | .018 | .100 | .055 | .017 | .092 | .051 | .016 | |
| 4.0 | .116 | .060 | .018 | .111 | .058 | .017 | .103 | .055 | .016 | .095 | .051 | .015 | .088 | .048 | .015 | |
| 5.0 | .108 | .055 | .016 | .105 | .054 | .016 | .097 | .051 | .015 | .091 | .048 | .014 | .084 | .045 | .014 | |
| 6.0 | .102 | .051 | .015 | .099 | .050 | .014 | .092 | .047 | .014 | .086 | .045 | .013 | .081 | .043 | .013 | |
| 7.0 | .096 | .048 | .013 | .093 | .047 | .013 | .088 | .044 | .013 | .083 | .042 | .012 | .078 | .040 | .012 | |
| 8.0 | .091 | .045 | .013 | .089 | .044 | .012 | .084 | .042 | .012 | .079 | .040 | .012 | .075 | .038 | .011 | |
| 9.0 | .087 | .042 | .012 | .085 | .041 | .012 | .080 | .040 | .011 | .076 | .038 | .011 | .072 | .037 | .011 | |
| 10.0 | .083 | .040 | .011 | .081 | .039 | .011 | .077 | .038 | .011 | .073 | .036 | .010 | .070 | .035 | .010 | |

| ρcc | 80% | | | 70% | | | 50% | | | 30% | | | 10% | | | 0 |
|------|-----------------------|------|------|------|------|------|--|------|------|------|------|------|------|------|------|---|
| ρw | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 50% | 30% | 10% | 0 |
| ρfc | 20% | | | 20% | | | 20% | | | 20% | | | 20% | | | 0 |
| RCR | RCR:Room Cavity Ratio | | | | | | Ceiling Cavity Exitance Coefficients(CCEC) | | | | | | | | | |
| 0.0 | .208 | .208 | .208 | .178 | .178 | .178 | .122 | .122 | .122 | .070 | .070 | .070 | .022 | .022 | .022 | |
| 1.0 | .187 | .176 | .165 | .160 | .151 | .142 | .109 | .104 | .098 | .063 | .060 | .057 | .020 | .019 | .019 | |
| 2.0 | .169 | .151 | .135 | .145 | .130 | .117 | .099 | .090 | .082 | .057 | .052 | .048 | .018 | .017 | .016 | |
| 3.0 | .155 | .132 | .113 | .133 | .114 | .098 | .091 | .079 | .069 | .053 | .046 | .041 | .017 | .015 | .013 | |
| 4.0 | .142 | .116 | .097 | .122 | .101 | .084 | .084 | .070 | .059 | .049 | .041 | .035 | .016 | .013 | .011 | |
| 5.0 | .132 | .104 | .084 | .113 | .090 | .073 | .078 | .063 | .051 | .045 | .037 | .031 | .015 | .012 | .010 | |
| 6.0 | .123 | .094 | .074 | .106 | .082 | .064 | .073 | .057 | .045 | .042 | .034 | .027 | .014 | .011 | .009 | |
| 7.0 | .115 | .086 | .066 | .099 | .075 | .057 | .068 | .052 | .041 | .040 | .031 | .024 | .013 | .010 | .008 | |
| 8.0 | .109 | .079 | .059 | .093 | .069 | .052 | .065 | .048 | .037 | .038 | .029 | .022 | .012 | .009 | .007 | |
| 9.0 | .103 | .074 | .054 | .089 | .064 | .047 | .061 | .045 | .033 | .036 | .027 | .020 | .012 | .009 | .007 | |
| 10.0 | .098 | .069 | .050 | .084 | .060 | .043 | .058 | .042 | .031 | .034 | .025 | .018 | .011 | .008 | .006 | |

C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: MEDIUM
 Temperature:23DEG
 Operators:TZH
 Test Date:2018-04-08

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.401
 Humidity:65.0%
 Test Distance:5.300m [K=1.0000]
 Remarks:

UGR(Unified Glare Rating) Table

| | | | | | | | | | | | | | | |
|--|------------------|------|------|------|----------------------|----------------|------|------|------|------------------|--|--|--|--|
| NAME: VN-TLO020-31 | | | | | TYPE:LED TRACK LIGHT | | | | | WEIGHT:1 | | | | |
| SPEC.:3000K CRI90 25-60D | | | | | DIM.: | | | | | SERIAL No.: | | | | |
| MFR.: 1 | | | | | SUR.: | | | | | Shielding Angle: | | | | |
| ceiling/cavity | 0.7 | 0.7 | 0.5 | 0.5 | 0.3 | 0.7 | 0.7 | 0.5 | 0.5 | 0.3 | | | | |
| walls | 0.5 | 0.3 | 0.5 | 0.3 | 0.3 | 0.5 | 0.3 | 0.5 | 0.3 | 0.3 | | | | |
| working plane | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | | | | |
| Room dimensions | Viewed crosswise | | | | | Viewed endwise | | | | | | | | |
| x = 2H y = 2H | 14.2 | 14.9 | 14.5 | 15.1 | 15.3 | 14.7 | 15.4 | 15.0 | 15.6 | 15.8 | | | | |
| 3H | 15.4 | 16.0 | 15.7 | 16.2 | 16.5 | 16.0 | 16.6 | 16.3 | 16.8 | 17.1 | | | | |
| 4H | 15.8 | 16.4 | 16.1 | 16.6 | 16.9 | 16.5 | 17.1 | 16.8 | 17.3 | 17.5 | | | | |
| 6H | 16.1 | 16.6 | 16.4 | 16.9 | 17.2 | 16.8 | 17.3 | 17.1 | 17.6 | 17.9 | | | | |
| 8H | 16.1 | 16.7 | 16.5 | 17.0 | 17.3 | 16.9 | 17.4 | 17.2 | 17.7 | 18.0 | | | | |
| 12H | 16.2 | 16.7 | 16.5 | 17.0 | 17.3 | 16.9 | 17.4 | 17.3 | 17.7 | 18.1 | | | | |
| 4H 2H | 14.8 | 15.4 | 15.1 | 15.6 | 15.9 | 15.2 | 15.8 | 15.5 | 16.0 | 16.3 | | | | |
| 3H | 16.1 | 16.6 | 16.4 | 16.9 | 17.2 | 16.6 | 17.1 | 17.0 | 17.4 | 17.7 | | | | |
| 4H | 16.6 | 17.1 | 17.0 | 17.4 | 17.7 | 17.2 | 17.6 | 17.5 | 18.0 | 18.3 | | | | |
| 6H | 16.9 | 17.3 | 17.3 | 17.7 | 18.1 | 17.5 | 18.0 | 18.0 | 18.3 | 18.7 | | | | |
| 8H | 17.0 | 17.4 | 17.5 | 17.8 | 18.2 | 17.7 | 18.1 | 18.1 | 18.5 | 18.9 | | | | |
| 12H | 17.1 | 17.5 | 17.6 | 17.9 | 18.3 | 17.8 | 18.1 | 18.2 | 18.6 | 19.0 | | | | |
| 8H 4H | 16.8 | 17.2 | 17.2 | 17.5 | 18.0 | 17.3 | 17.7 | 17.7 | 18.1 | 18.5 | | | | |
| 6H | 17.2 | 17.5 | 17.7 | 18.0 | 18.4 | 17.8 | 18.1 | 18.2 | 18.5 | 19.0 | | | | |
| 8H | 17.4 | 17.7 | 17.9 | 18.1 | 18.6 | 18.0 | 18.2 | 18.4 | 18.7 | 19.2 | | | | |
| 12H | 17.5 | 17.8 | 18.0 | 18.3 | 18.8 | 18.1 | 18.4 | 18.6 | 18.9 | 19.4 | | | | |
| 12H 4H | 16.8 | 17.1 | 17.2 | 17.5 | 18.0 | 17.3 | 17.6 | 17.7 | 18.0 | 18.5 | | | | |
| 6H | 17.2 | 17.5 | 17.7 | 18.0 | 18.4 | 17.8 | 18.1 | 18.2 | 18.5 | 19.0 | | | | |
| 8H | 17.4 | 17.7 | 17.9 | 18.2 | 18.7 | 18.0 | 18.2 | 18.5 | 18.7 | 19.2 | | | | |
| Variations with the observer position at spacings: | | | | | | | | | | | | | | |
| S = 1.0H | + 0.3 / - 0.4 | | | | | + 0.3 / - 0.4 | | | | | | | | |
| 1.5H | + 0.3 / - 0.3 | | | | | + 0.5 / - 0.2 | | | | | | | | |
| 2.0H | + 0.3 / - 0.3 | | | | | + 0.4 / - 0.4 | | | | | | | | |

CIE Pub.117, 1813 lm Total Lamp Luminous Flux Corrected (8log(F/F0) = 2.1)

C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: MEDIUM
 Temperature:23DEG
 Operators:TZH
 Test Date:2018-04-08

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.401
 Humidity:65.0%
 Test Distance:5.300m [K=1.0000]
 Remarks:

UTILIZATION FACTORS TABLE

| | | |
|--------------------------|----------------------|------------------|
| NAME: VN-TLO020-31 | TYPE:LED TRACK LIGHT | WEIGHT:1 |
| SPEC.:3000K CRI90 25-60D | DIM.: | SERIAL No.: |
| MFR.: 1 | SUR.: | Shielding Angle: |

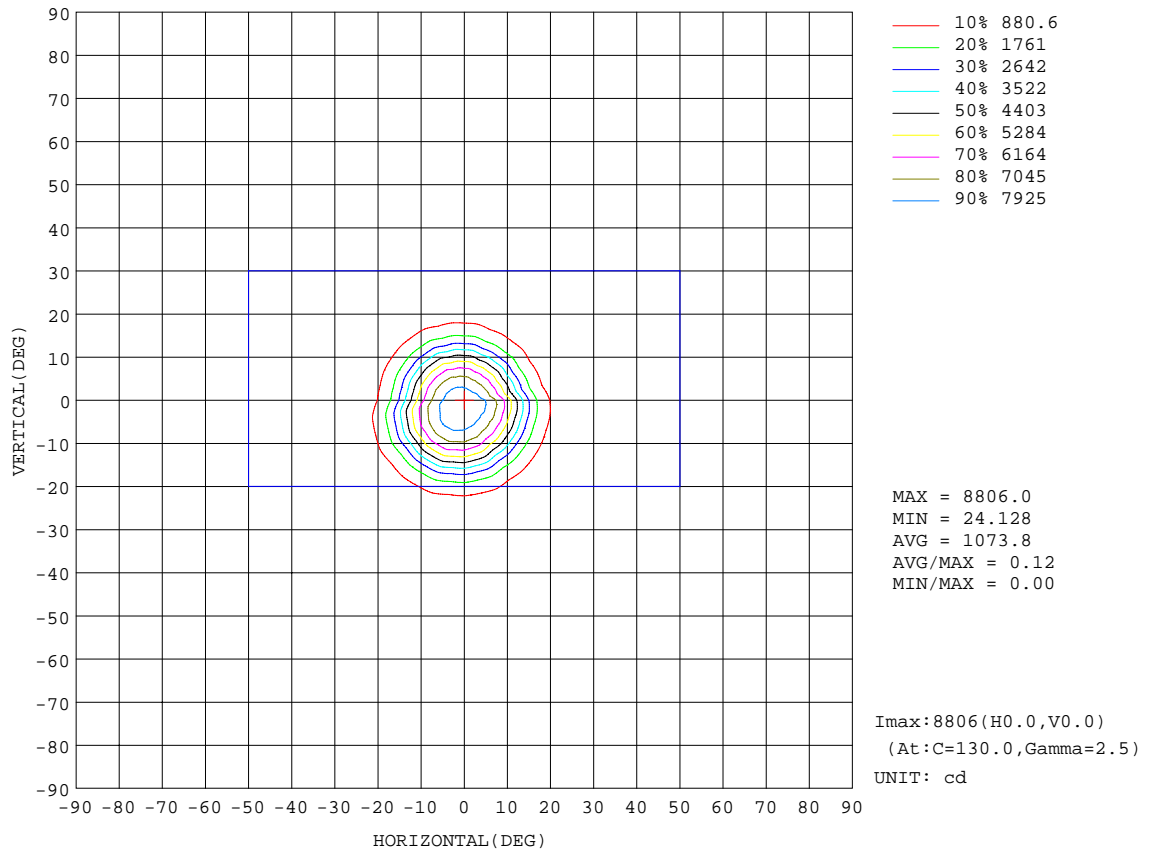
| REFLECTANCE | | | | | | | | | | |
|----------------------------------|---|-----|-----------|-----|-----|-----|---------------|-----|-----|--------|
| Ceiling | 0.8 | 0.8 | 0.8 | 0.7 | 0.7 | 0.7 | 0.5 | 0.5 | 0.5 | 0 |
| Walls | 0.7 | 0.5 | 0.3 | 0.7 | 0.5 | 0.3 | 0.7 | 0.5 | 0.3 | 0 |
| Working plane | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0 |
| ROOM INDEX | UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$ | | | | | | | | | |
| k = 0.60 | 87 | 81 | 77 | 87 | 81 | 77 | 86 | 80 | 77 | 73 |
| 0.80 | 94 | 89 | 85 | 94 | 88 | 85 | 92 | 88 | 84 | 81 |
| 1.00 | 99 | 93 | 89 | 98 | 93 | 89 | 96 | 92 | 88 | 84 |
| 1.25 | 102 | 97 | 94 | 101 | 97 | 93 | 99 | 95 | 92 | 88 |
| 1.50 | 105 | 100 | 97 | 104 | 100 | 96 | 101 | 98 | 95 | 90 |
| 2.00 | 108 | 104 | 100 | 106 | 102 | 99 | 103 | 100 | 98 | 92 |
| 2.50 | 110 | 106 | 103 | 108 | 104 | 102 | 104 | 102 | 99 | 93 |
| 3.00 | 111 | 108 | 105 | 109 | 106 | 104 | 105 | 103 | 101 | 94 |
| 4.00 | 113 | 110 | 108 | 111 | 109 | 107 | 107 | 105 | 103 | 96 |
| 5.00 | 114 | 112 | 110 | 112 | 110 | 109 | 108 | 106 | 105 | 97 |
| ROOM INDEX | UF(total) | | | | | | | | | Direct |
| According to DIN EN 13032-2 2004 | | | Suspended | | | | SHRNOM = 1.25 | | | |

C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: MEDIUM
 Temperature:23DEG
 Operators:TZH
 Test Date:2018-04-08

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.401
 Humidity:65.0%
 Test Distance:5.300m [K=1.0000]
 Remarks:

ISOCANDELA DIAGRAM

| | | |
|--------------------------|----------------------|------------------|
| NAME: VN-TL0020-31 | TYPE:LED TRACK LIGHT | WEIGHT:1 |
| SPEC.:3000K CRI90 25-60D | DIM.: | SERIAL No.: |
| MFR.: 1 | SUR.: | Shielding Angle: |

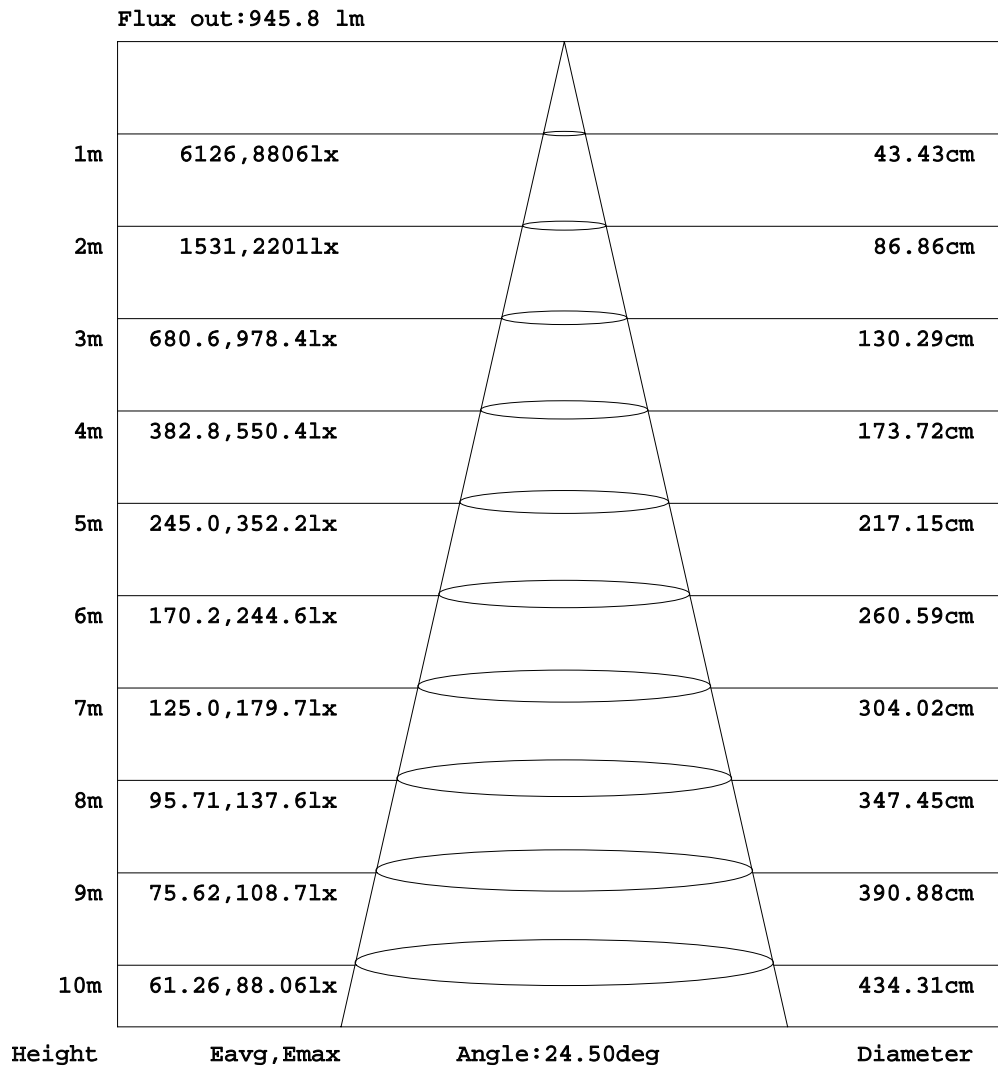


C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: MEDIUM
 Temperature:23DEG
 Operators:TZH
 Test Date:2018-04-08

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.401
 Humidity:65.0%
 Test Distance:5.300m [K=1.0000]
 Remarks:

AAI Figure

| | | |
|--------------------------|----------------------|------------------|
| NAME: VN-TLO020-31 | TYPE:LED TRACK LIGHT | WEIGHT:1 |
| SPEC.:3000K CRI90 25-60D | DIM.: | SERIAL No.: |
| MFR.: 1 | SUR.: | Shielding Angle: |



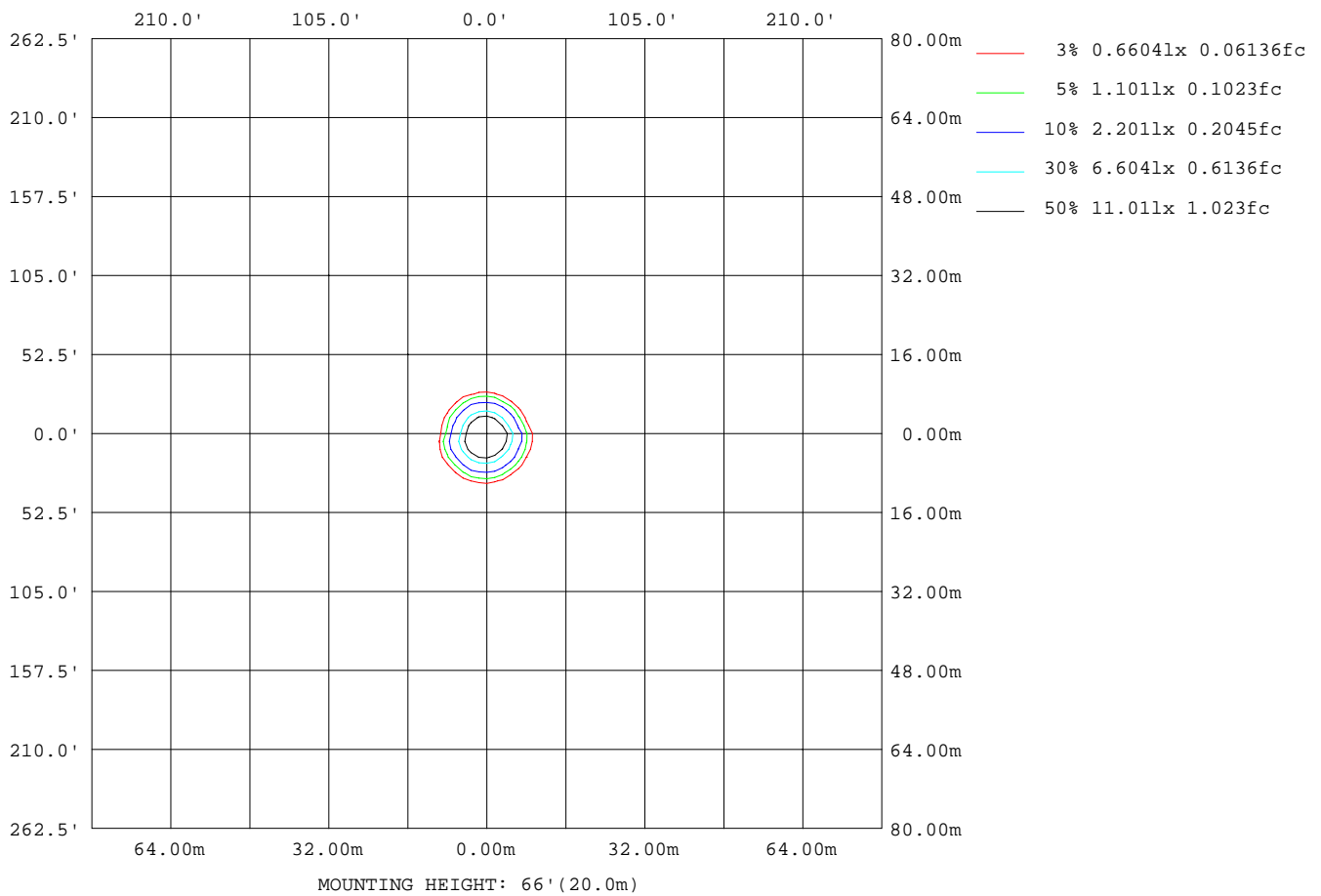
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: MEDIUM
 Temperature:23DEG
 Operators:TZH
 Test Date:2018-04-08

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.401
 Humidity:65.0%
 Test Distance:5.300m [K=1.0000]
 Remarks:

ISOLUX DIAGRAM

| | | |
|--------------------------|----------------------|------------------|
| NAME: VN-TL0020-31 | TYPE:LED TRACK LIGHT | WEIGHT:1 |
| SPEC.:3000K CRI90 25-60D | DIM.: | SERIAL No.: |
| MFR.: 1 | SUR.: | Shielding Angle: |



C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: MEDIUM
 Temperature:23DEG
 Operators:TZH
 Test Date:2018-04-08

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.401
 Humidity:65.0%
 Test Distance:5.300m [K=1.0000]
 Remarks:

LED Avg.L Report

| | | |
|--------------------------|----------------------|------------------|
| NAME: VN-TLO020-31 | TYPE:LED TRACK LIGHT | WEIGHT:1 |
| SPEC.:3000K CRI90 25-60D | DIM.: | SERIAL No.: |
| MFR.: 1 | SUR.: | Shielding Angle: |

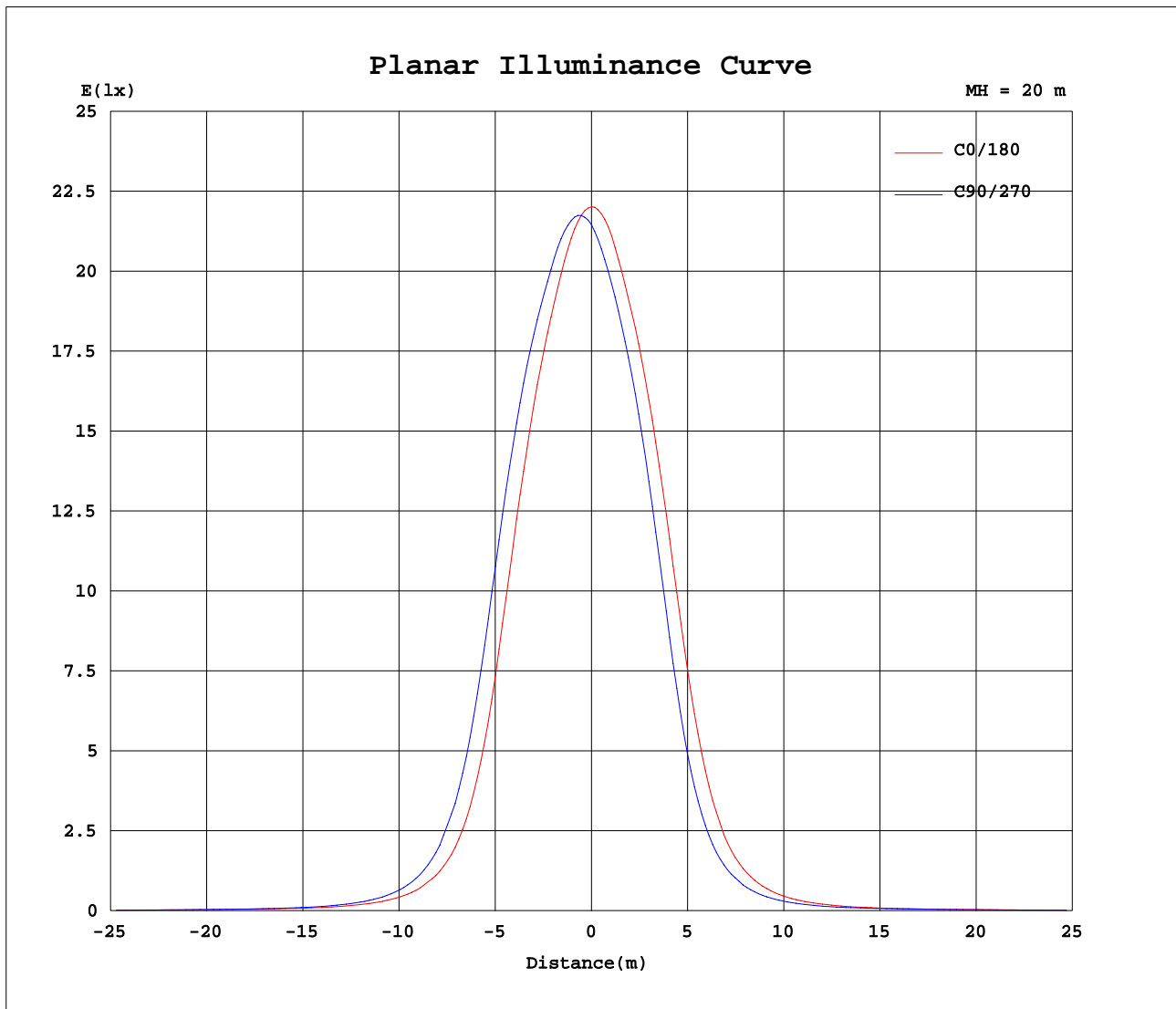
| AvgL | cd/m2 |
|----------------|-------|
| L_0~180(65)av | 13318 |
| L_0~180(75)av | 9940 |
| L_0~180(85)av | 7948 |
| L_90~270(65)av | 13834 |
| L_90~270(75)av | 10184 |
| L_90~270(85)av | 8136 |
| L_45(65)av | 13632 |
| L_45(75)av | 10078 |
| L_45(85)av | 8050 |

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: MEDIUM
 Temperature:23DEG
 Operators:TZH
 Test Date:2018-04-08

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.401
 Humidity:65.0%
 Test Distance:5.300m [K=1.0000]
 Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: MEDIUM
 Temperature: 23DEG
 Operators: TZH
 Test Date: 2018-04-08

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.401
 Humidity: 65.0%
 Test Distance: 5.300m [K=1.0000]
 Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

| | | |
|--------------------------|----------------------|------------------|
| NAME: VN-TLO020-31 | TYPE:LED TRACK LIGHT | WEIGHT:1 |
| SPEC.:3000K CRI90 25-60D | DIM.: | SERIAL No.: |
| MFR.: 1 | SUR.: | Shielding Angle: |

Table--2

UNIT: cd

| C(DEG) γ (DEG) | 190 | 200 | 210 | 220 | 230 | 240 | 250 | 260 | 270 | 280 | 290 | 300 | 310 | 320 | 330 | 340 | 350 | | |
|--------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|--|--|
| 0 | 8661 | 8661 | 8661 | 8661 | 8661 | 8661 | 8661 | 8661 | 8661 | 8661 | 8661 | 8661 | 8661 | 8661 | 8661 | 8661 | 8661 | | |
| 5 | 7662 | 7655 | 7549 | 7554 | 7471 | 7474 | 7342 | 7342 | 7270 | 7276 | 7145 | 7173 | 7139 | 7210 | 7199 | 7332 | 7379 | | |
| 10 | 5513 | 5477 | 5305 | 5273 | 5131 | 5139 | 4798 | 4814 | 4666 | 4688 | 4401 | 4479 | 4445 | 4609 | 4483 | 4749 | 4884 | | |
| 15 | 2498 | 2485 | 2327 | 2297 | 2142 | 2133 | 1854 | 1853 | 1737 | 1752 | 1569 | 1629 | 1604 | 1720 | 1632 | 1817 | 1916 | | |
| 20 | 825 | 821 | 765 | 743 | 693 | 688 | 591 | 589 | 557 | 556 | 506 | 516 | 518 | 551 | 522 | 572 | 609 | | |
| 25 | 312 | 309 | 292 | 281 | 265 | 261 | 229 | 226 | 216 | 215 | 197 | 200 | 200 | 212 | 203 | 221 | 234 | | |
| 30 | 142 | 140 | 134 | 131 | 124 | 123 | 112 | 112 | 107 | 107 | 100 | 101 | 100 | 106 | 103 | 111 | 114 | | |
| 35 | 75.6 | 75.5 | 73.4 | 72.4 | 69.8 | 69.7 | 65.5 | 65.3 | 63.8 | 63.4 | 60.8 | 60.6 | 60.5 | 62.2 | 61.2 | 63.6 | 65.3 | | |
| 40 | 52.1 | 52.0 | 51.3 | 50.8 | 50.0 | 49.9 | 48.2 | 48.0 | 47.4 | 47.1 | 46.0 | 45.9 | 45.7 | 46.3 | 46.1 | 47.1 | 47.8 | | |
| 45 | 40.2 | 40.1 | 39.4 | 39.1 | 38.5 | 38.4 | 37.9 | 37.7 | 37.3 | 37.2 | 36.8 | 36.9 | 36.8 | 37.0 | 37.2 | 37.7 | 37.9 | | |
| 50 | 31.9 | 31.5 | 30.7 | 30.6 | 30.1 | 30.0 | 29.9 | 29.8 | 29.6 | 29.7 | 29.6 | 29.7 | 29.7 | 29.8 | 30.3 | 30.6 | 30.6 | | |
| 55 | 25.7 | 25.2 | 24.6 | 24.6 | 24.3 | 24.4 | 24.7 | 24.8 | 24.6 | 24.5 | 24.5 | 24.6 | 24.5 | 24.6 | 25.2 | 25.4 | 25.4 | | |
| 60 | 21.1 | 20.6 | 20.1 | 20.4 | 20.4 | 20.8 | 21.1 | 21.3 | 21.2 | 21.0 | 20.9 | 20.7 | 20.8 | 20.8 | 21.4 | 21.4 | 21.4 | | |
| 65 | 16.8 | 16.7 | 16.3 | 16.8 | 16.9 | 16.9 | 16.9 | 16.9 | 16.7 | 16.6 | 16.4 | 16.3 | 16.1 | 16.6 | 16.8 | 17.2 | 17.0 | | |
| 70 | 12.1 | 12.1 | 11.9 | 11.9 | 11.5 | 11.7 | 11.6 | 11.7 | 11.4 | 11.2 | 10.9 | 10.8 | 10.8 | 11.0 | 11.2 | 11.5 | 11.3 | | |
| 75 | 7.80 | 7.70 | 7.43 | 7.46 | 7.25 | 7.24 | 7.03 | 7.02 | 6.76 | 6.73 | 6.51 | 6.56 | 6.46 | 6.63 | 6.68 | 6.94 | 6.98 | | |
| 80 | 4.14 | 4.13 | 4.00 | 4.03 | 3.90 | 3.88 | 3.77 | 3.74 | 3.61 | 3.59 | 3.49 | 3.51 | 3.45 | 3.53 | 3.51 | 3.65 | 3.71 | | |
| 85 | 1.97 | 1.97 | 1.85 | 1.87 | 1.75 | 1.74 | 1.63 | 1.61 | 1.49 | 1.47 | 1.37 | 1.40 | 1.33 | 1.41 | 1.40 | 1.54 | 1.59 | | |
| 90 | 0.42 | 0.42 | 0.42 | 0.43 | 0.43 | 0.44 | 0.43 | 0.46 | 0.46 | 0.46 | 0.46 | 0.46 | 0.45 | 0.45 | 0.43 | 0.44 | 0.42 | | |
| 95 | 0.50 | 0.51 | 0.50 | 0.52 | 0.51 | 0.53 | 0.53 | 0.55 | 0.55 | 0.56 | 0.55 | 0.56 | 0.54 | 0.55 | 0.53 | 0.53 | 0.51 | | |
| 100 | 0.58 | 0.60 | 0.59 | 0.61 | 0.60 | 0.62 | 0.61 | 0.63 | 0.63 | 0.65 | 0.63 | 0.64 | 0.62 | 0.64 | 0.61 | 0.62 | 0.60 | | |
| 105 | 0.66 | 0.67 | 0.66 | 0.67 | 0.67 | 0.68 | 0.68 | 0.70 | 0.69 | 0.70 | 0.69 | 0.70 | 0.68 | 0.70 | 0.67 | 0.69 | 0.67 | | |
| 110 | 0.71 | 0.72 | 0.71 | 0.73 | 0.72 | 0.74 | 0.73 | 0.76 | 0.75 | 0.76 | 0.75 | 0.76 | 0.74 | 0.75 | 0.73 | 0.74 | 0.72 | | |
| 115 | 0.79 | 0.80 | 0.79 | 0.81 | 0.81 | 0.83 | 0.84 | 0.86 | 0.86 | 0.87 | 0.87 | 0.87 | 0.86 | 0.86 | 0.85 | 0.85 | 0.82 | | |
| 120 | 0.98 | 0.99 | 1.00 | 1.03 | 1.04 | 1.06 | 1.11 | 1.12 | 1.15 | 1.15 | 1.20 | 1.18 | 1.19 | 1.15 | 1.17 | 1.13 | 1.09 | | |
| 125 | 1.53 | 1.53 | 1.59 | 1.64 | 1.72 | 1.73 | 1.90 | 1.92 | 2.01 | 2.00 | 2.15 | 2.10 | 2.12 | 2.02 | 2.07 | 1.93 | 1.85 | | |
| 130 | 3.06 | 3.07 | 3.21 | 3.35 | 3.51 | 3.56 | 3.96 | 3.99 | 4.21 | 4.21 | 4.52 | 4.42 | 4.46 | 4.23 | 4.31 | 3.99 | 3.80 | | |
| 135 | 6.30 | 6.32 | 6.57 | 6.80 | 7.09 | 7.17 | 7.79 | 7.87 | 8.20 | 8.21 | 8.68 | 8.53 | 8.59 | 8.25 | 8.27 | 7.80 | 7.50 | | |
| 140 | 11.1 | 11.2 | 11.5 | 11.9 | 12.2 | 12.3 | 13.0 | 13.2 | 13.5 | 13.5 | 14.1 | 13.9 | 14.0 | 13.6 | 13.5 | 13.0 | 12.6 | | |
| 145 | 16.8 | 16.8 | 17.2 | 17.6 | 17.9 | 18.0 | 18.8 | 18.9 | 19.2 | 19.2 | 19.7 | 19.5 | 19.6 | 19.2 | 19.1 | 18.6 | 18.2 | | |
| 150 | 22.0 | 22.1 | 22.4 | 22.8 | 23.1 | 23.2 | 23.8 | 23.8 | 24.1 | 24.1 | 24.4 | 24.2 | 24.3 | 23.9 | 23.8 | 23.4 | 23.1 | | |
| 155 | 25.7 | 25.7 | 25.9 | 26.2 | 26.4 | 26.5 | 26.8 | 26.9 | 27.1 | 27.0 | 27.0 | 26.7 | 26.6 | 26.4 | 26.2 | 26.0 | 26.0 | | |
| 160 | 26.8 | 26.8 | 26.8 | 27.0 | 27.0 | 27.1 | 27.1 | 27.2 | 27.1 | 26.9 | 26.5 | 26.1 | 25.9 | 25.8 | 25.4 | 25.5 | 25.8 | | |
| 165 | 25.0 | 25.0 | 24.9 | 25.0 | 24.8 | 24.9 | 24.6 | 24.5 | 24.2 | 23.9 | 23.4 | 23.0 | 22.6 | 22.5 | 22.1 | 22.4 | 22.8 | | |
| 170 | 21.1 | 21.2 | 21.1 | 21.0 | 20.7 | 20.5 | 19.9 | 19.6 | 19.2 | 18.8 | 18.2 | 18.0 | 17.8 | 17.8 | 17.6 | 17.9 | 18.2 | | |
| 175 | 16.8 | 16.9 | 17.0 | 17.1 | 16.9 | 16.5 | 16.0 | 15.6 | 15.3 | 15.1 | 14.9 | 14.8 | 14.7 | 14.4 | 13.9 | 13.9 | 14.1 | | |
| 180 | 14.4 | 14.4 | 14.7 | 15.1 | 15.2 | 15.0 | 14.9 | 14.9 | 15.0 | 14.9 | 14.9 | 14.9 | 15.1 | 15.0 | 14.5 | 14.1 | 13.9 | | |

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 C Interval: 10.0DEG
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