

Report No.:

Test Time: 2018/10/12 10:21

Luminaire Property

Luminaire Manufacturer:

Luminaire Category: RIBBONLYTE

Luminous Length (mm): 500

Luminous Height (mm): 1

Current: 0.415 A

Power Factor: 1.000

Luminaire Description: RBS220246.0B

Luminous Width (mm): 10

Voltage: 24.0 V

Power: 9.95 W

Photometric Results

CIE Class: Direct

Measurement Flux: 232.4 lm

Downward Ratio: 99%

Horizontal Diffuse Angle(50%): H130.2

Vertical Diffuse Angle(50%): V130.1

Luminaire Efficacy Rating (LER): 23

Max. Intensity: 66.27 cd

Total Rated Lamp Lumens: 232.4 lm

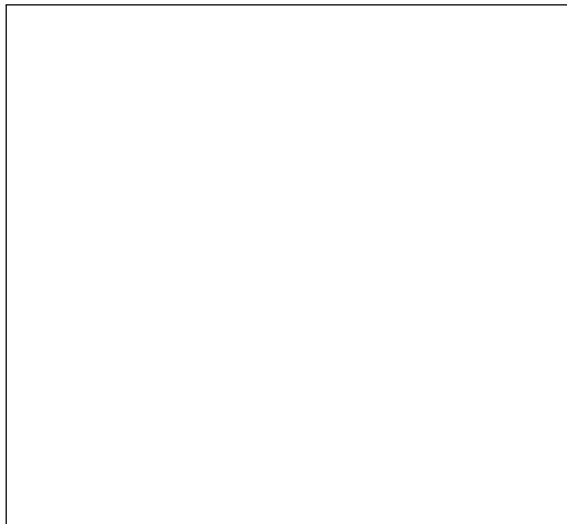
Efficiency: 100%

Upward Ratio: 1%

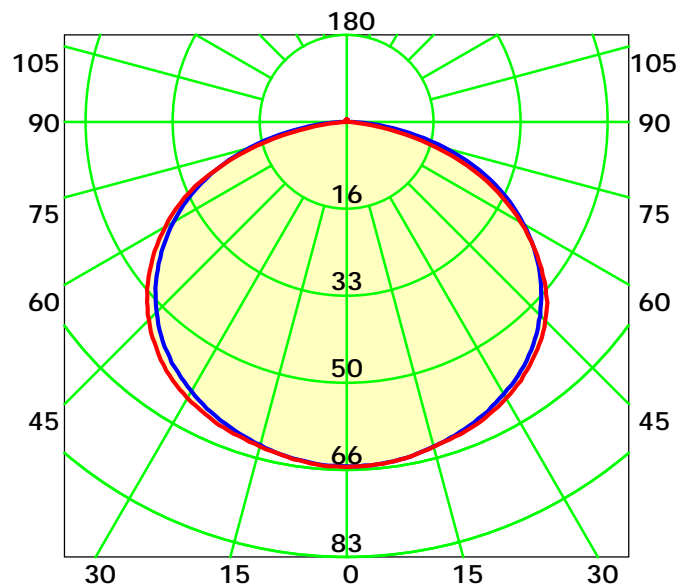
Central Intensity: 66.09 cd

Pos of Max. Intensity: H30 V2

Picture Of Luminaire



Luminous Intensity Distribution Curve



Average Diffuse Angle(50%): 130.2° Unit: cd

— C0-C180 — C90-C270

C Plane (°):0.0-360.0: 30.0

Test Lab:

Test Type: TYPE C

Temperature: 25

Operator: Aaron

Gamma Plane (°):0.0-180.0: 1.0

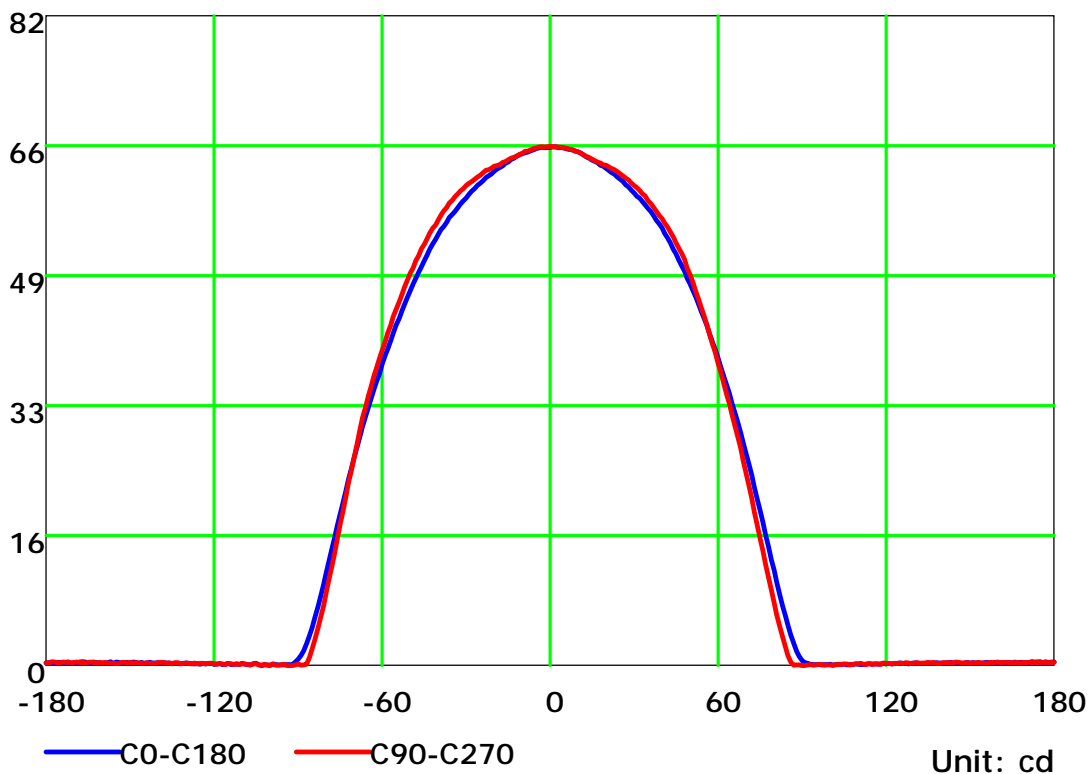
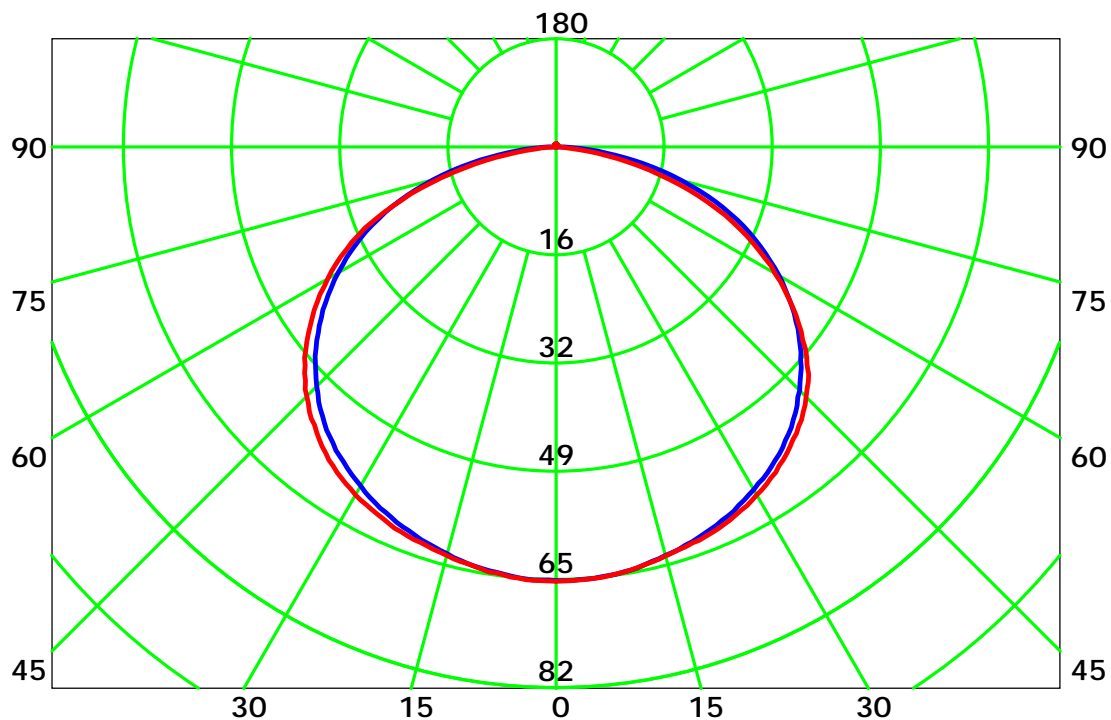
Test Device: GPM-1800B

Distance: 9.028 m

Humidity: 60%

Inspector:

Luminous Intensity Distribution Curve



C Plane (°):0.0-360.0: 30.0

Test Lab:

Test Type: TYPE C

Temperature: 25

Operator: Aaron

Gamma Plane (°):0.0-180.0:1.0

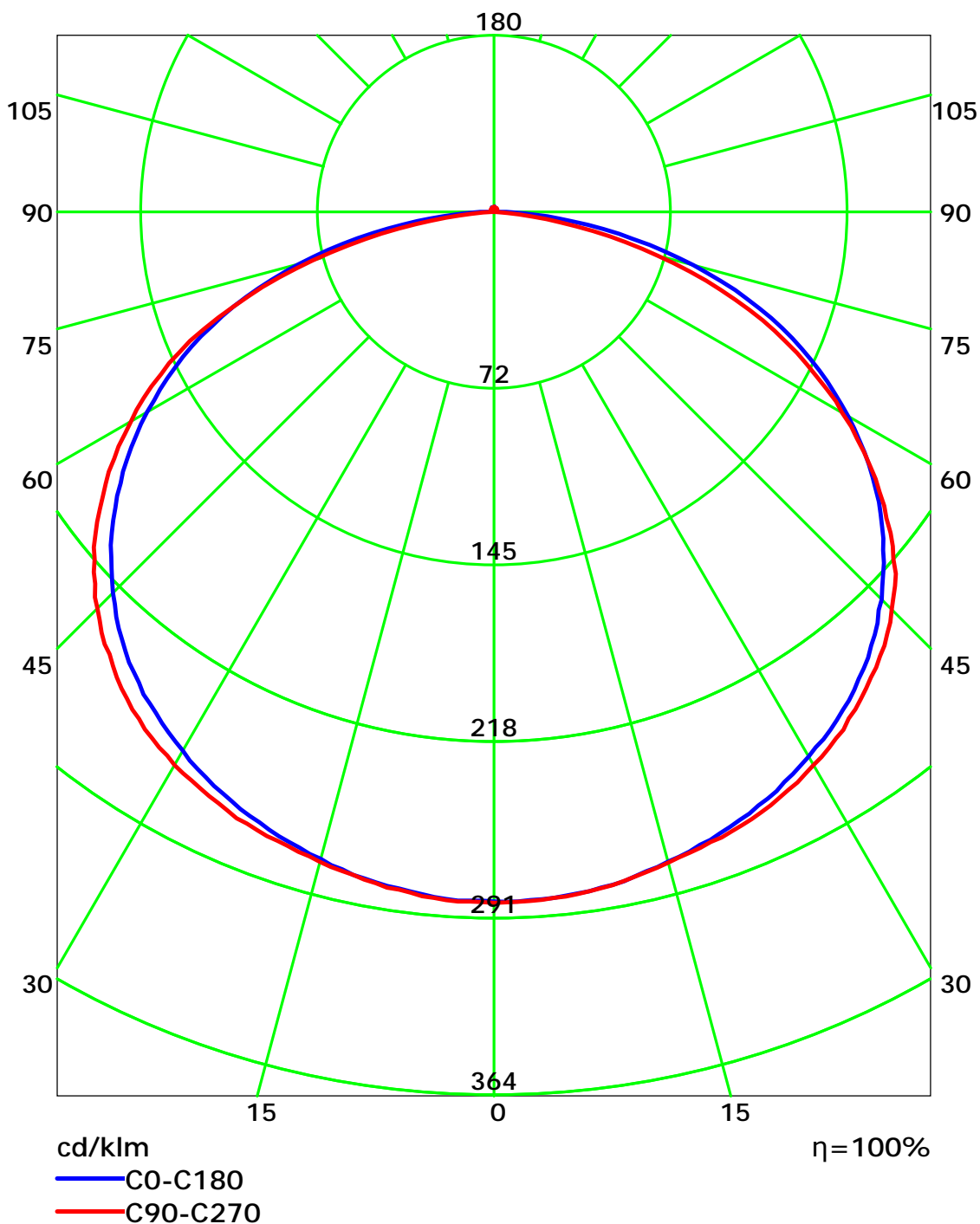
Test Device: GPM-1800B

Distance: 9.028 m

Humidity: 60%

Inspector:

Luminous Intensity Distribution Curve(cd/klm)



C Plane (°):0.0-360.0: 30.0
Test Lab:
Test Type: TYPE C
Temperature: 25
Operator: Aaron

Gamma Plane (°):0.0-180.0:1.0
Test Device: GPM-1800B
Distance: 9.028 m
Humidity: 60%
Inspector:

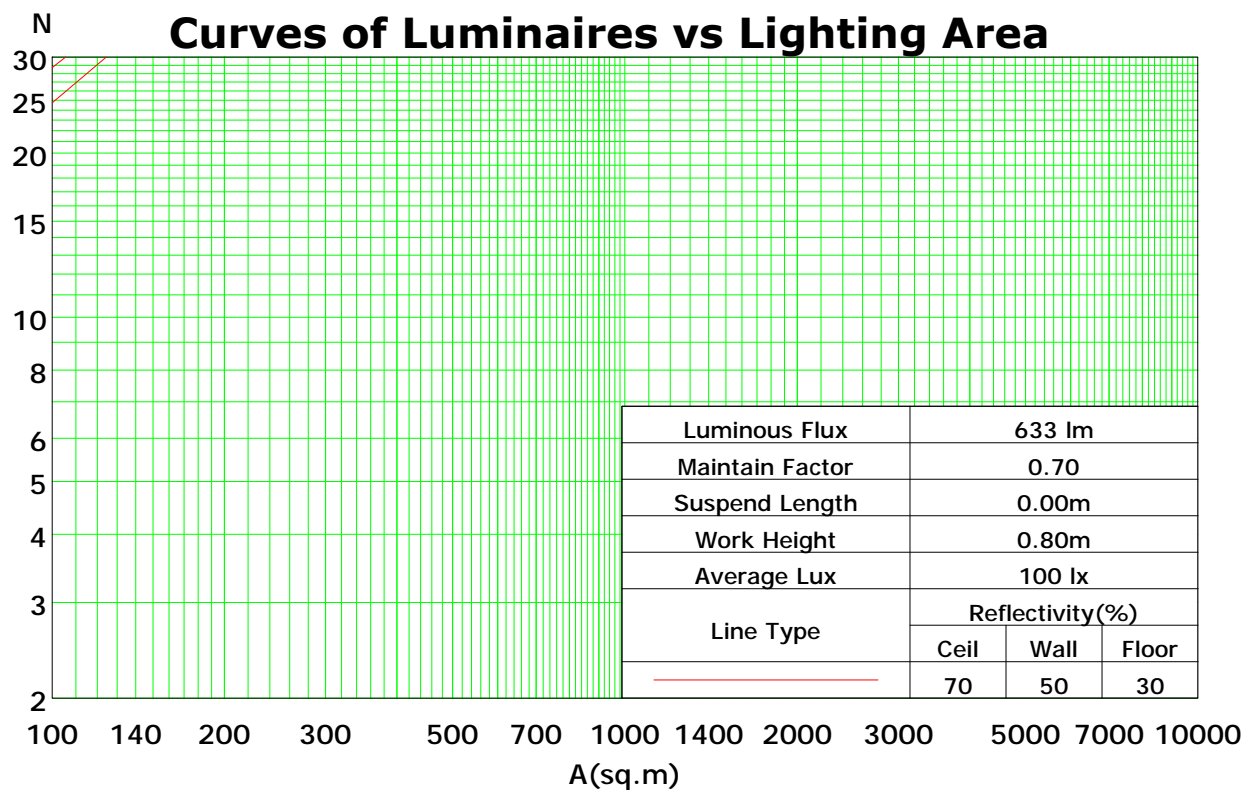
Coefficients Of Utilization - Zonal Cavity Method

| | | | | | | | | | | | | | | | | | | |
|-----|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|
| RC | 0.8 | 0.8 | 0.8 | 0.8 | 0.7 | 0.7 | 0.7 | 0.7 | 0.5 | 0.5 | 0.5 | 0.3 | 0.3 | 0.3 | 0.1 | 0.1 | 0.1 | 0 |
| RW | 0.7 | 0.5 | 0.3 | 0.1 | 0.7 | 0.5 | 0.3 | 0.1 | 0.5 | 0.3 | 0.1 | 0.5 | 0.3 | 0.1 | 0.5 | 0.3 | 0.1 | 0 |
| RCR | RF = 0.2 | | | | | | | | | | | | | | | | | |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 101 | 101 | 101 | 99 |
| 1 | 108 | 102 | 98 | 94 | 105 | 100 | 96 | 92 | 96 | 92 | 89 | 92 | 89 | 86 | 88 | 86 | 83 | 81 |
| 2 | 97 | 88 | 81 | 75 | 94 | 86 | 80 | 74 | 83 | 77 | 72 | 79 | 74 | 70 | 76 | 72 | 68 | 66 |
| 3 | 88 | 77 | 68 | 61 | 85 | 75 | 67 | 60 | 72 | 65 | 59 | 69 | 63 | 58 | 66 | 61 | 57 | 55 |
| 4 | 80 | 67 | 58 | 51 | 78 | 66 | 57 | 51 | 63 | 56 | 50 | 61 | 54 | 49 | 59 | 53 | 48 | 46 |
| 5 | 73 | 60 | 50 | 43 | 71 | 59 | 50 | 43 | 56 | 48 | 42 | 54 | 47 | 42 | 52 | 46 | 41 | 39 |
| 6 | 68 | 54 | 44 | 37 | 65 | 53 | 44 | 37 | 51 | 43 | 37 | 49 | 42 | 36 | 47 | 41 | 36 | 34 |
| 7 | 62 | 48 | 39 | 33 | 61 | 47 | 39 | 33 | 46 | 38 | 32 | 44 | 37 | 32 | 43 | 36 | 32 | 30 |
| 8 | 58 | 44 | 35 | 29 | 56 | 43 | 35 | 29 | 42 | 34 | 29 | 40 | 33 | 28 | 39 | 33 | 28 | 26 |
| 9 | 54 | 40 | 32 | 26 | 53 | 40 | 31 | 26 | 38 | 31 | 26 | 37 | 30 | 25 | 36 | 30 | 25 | 23 |
| 10 | 51 | 37 | 29 | 23 | 49 | 36 | 29 | 23 | 35 | 28 | 23 | 34 | 28 | 23 | 33 | 27 | 23 | 21 |

Spacing Criteria (0-180): 1.36

Spacing Criteria (90-270): 1.38

Spacing Criteria (Diagonal): 1.51



C Plane (°):0.0-360.0: 30.0

Test Lab:

Test Type: TYPE C

Temperature: 25

Operator: Aaron

Gamma Plane (°):0.0-180.0:1.0

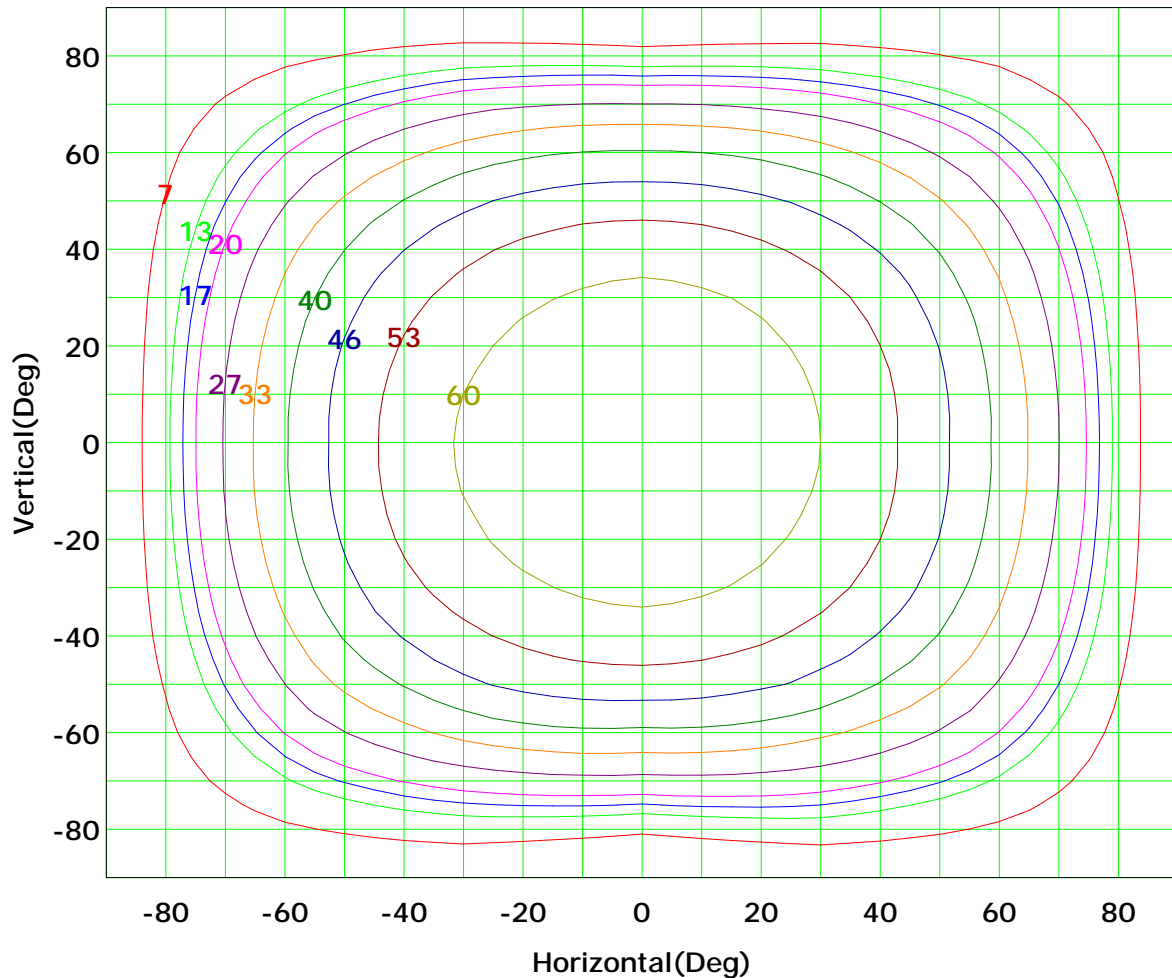
Test Device: GPM-1800B

Distance: 9.028 m

Humidity: 60%

Inspector:

Isocandela (rectangle)



I_{max} (100%): 66 cd

| | | | |
|---------|-------|---------|-------|
| (10%): | 7 cd | (20%): | 13 cd |
| (25%): | 17 cd | (30%): | 20 cd |
| (40%): | 27 cd | (50%): | 33 cd |
| (60%): | 40 cd | (70%): | 46 cd |
| (80%): | 53 cd | (90%): | 60 cd |

C Plane (°):0.0-360.0: 30.0

Test Lab:

Test Type: TYPE C

Temperature: 25

Operator: Aaron

Gamma Plane (°):0.0-180.0:1.0

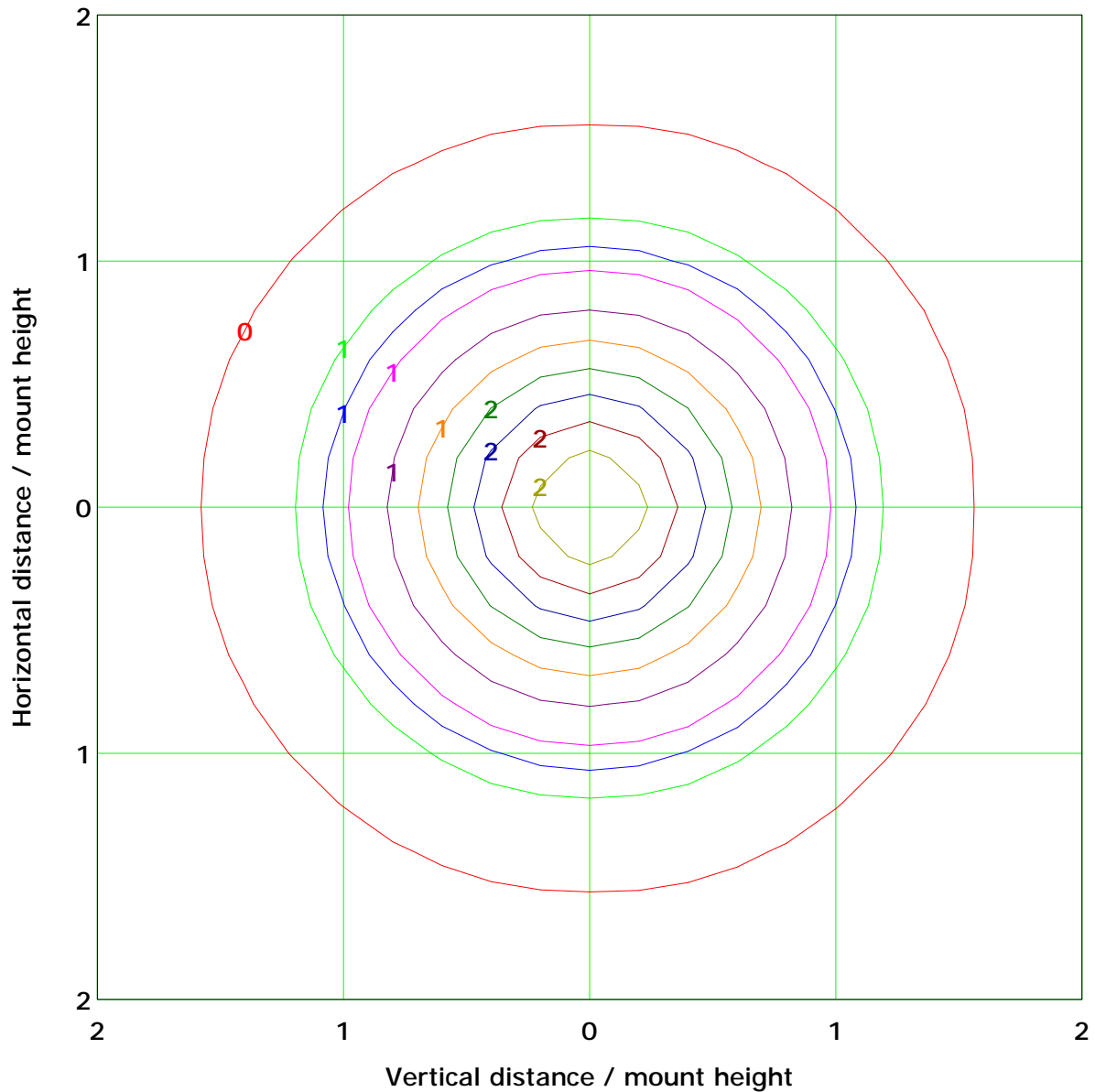
Test Device: GPM-1800B

Distance: 9.028 m

Humidity: 60%

Inspector:

IsoLux Plot



Mounting Height: 5.0m Max Lux(100%): 2.6 lx

| | |
|----------------|----------------|
| (10%): 0.3 lx | (20%): 0.5 lx |
| (25%): 0.7 lx | (30%): 0.8 lx |
| (40%): 1.1 lx | (50%): 1.3 lx |
| (60%): 1.6 lx | (70%): 1.9 lx |
| (80%): 2.1 lx | (90%): 2.4 lx |

C Plane (°):0.0-360.0: 30.0

Test Lab:

Test Type: TYPE C

Temperature: 25

Operator: Aaron

Gamma Plane (°):0.0-180.0:1.0

Test Device: GPM-1800B

Distance: 9.028 m

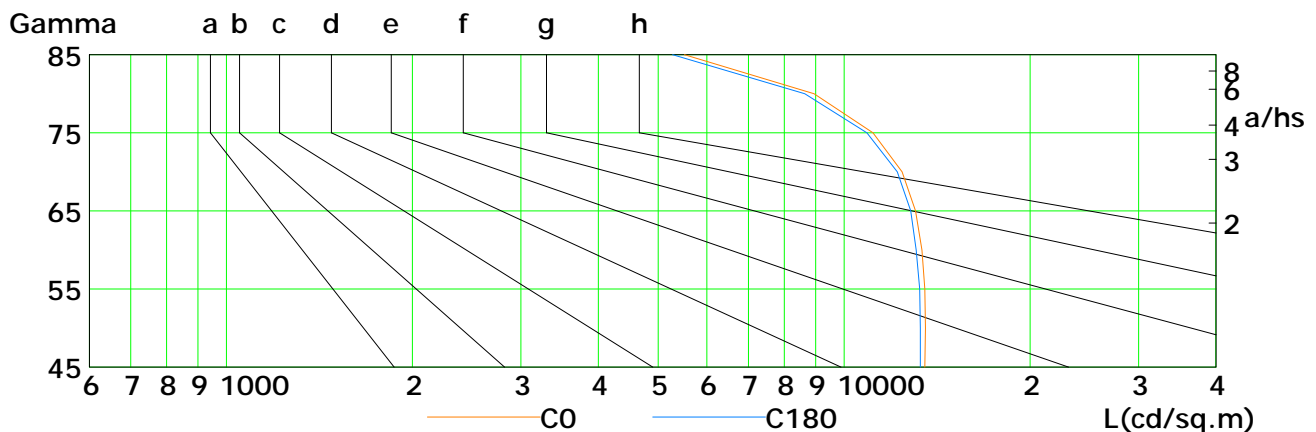
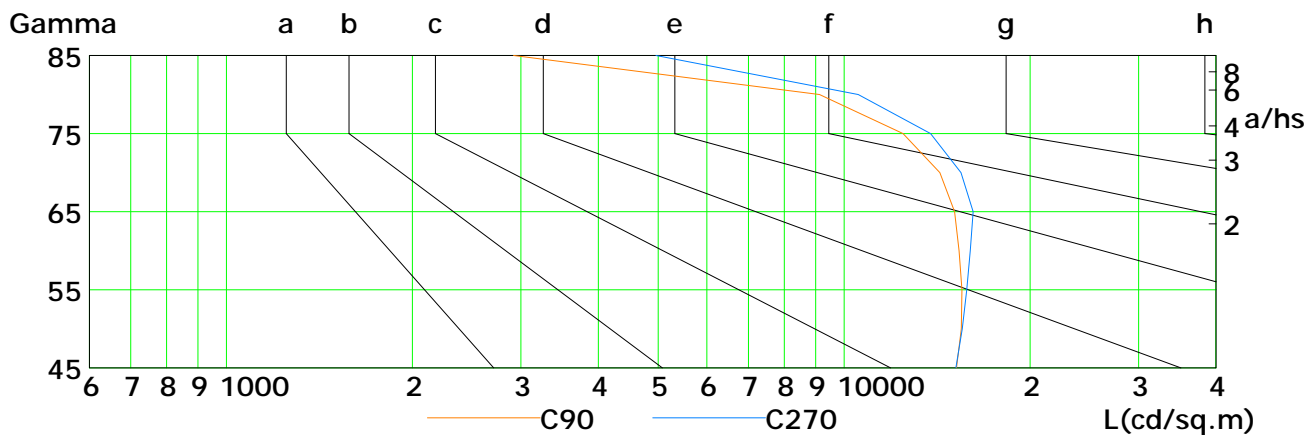
Humidity: 60%

Inspector:

Lum Limit Curve

| Dazzle | Quality | Illuminance (lx) | | | | | | | |
|--------|---------|------------------|------|------|-------|-------|-------|-------|-------|
| 1.15 | A | 2000 | 1000 | 500 | <=300 | | | | |
| 1.50 | B | | 2000 | 1000 | 500 | <=300 | | | |
| 1.85 | C | | | 2000 | 1000 | 500 | <=300 | | |
| 2.20 | D | | | | 2000 | 1000 | 500 | <=300 | |
| 2.55 | E | | | | | 2000 | 1000 | 500 | <=300 |

a b c d e f g h



| L(cd/sq.m) | G45 | G50 | G55 | G60 | G65 | G70 | G75 | G80 | G85 |
|------------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| C0 | 13512 | 13542 | 13517 | 13365 | 13054 | 12418 | 11142 | 8944 | 5515 |
| C90 | 15218 | 15483 | 15521 | 15351 | 15107 | 14301 | 12456 | 9122 | 2916 |
| C180 | 13283 | 13289 | 13251 | 13092 | 12828 | 12198 | 10883 | 8643 | 5279 |
| C270 | 15170 | 15536 | 15796 | 16017 | 16191 | 15464 | 13806 | 10546 | 4958 |

C Plane (°):0.0-360.0: 30.0

Test Lab:

Test Type: TYPE C

Temperature: 25

Operator: Aaron

Gamma Plane (°):0.0-180.0:1.0

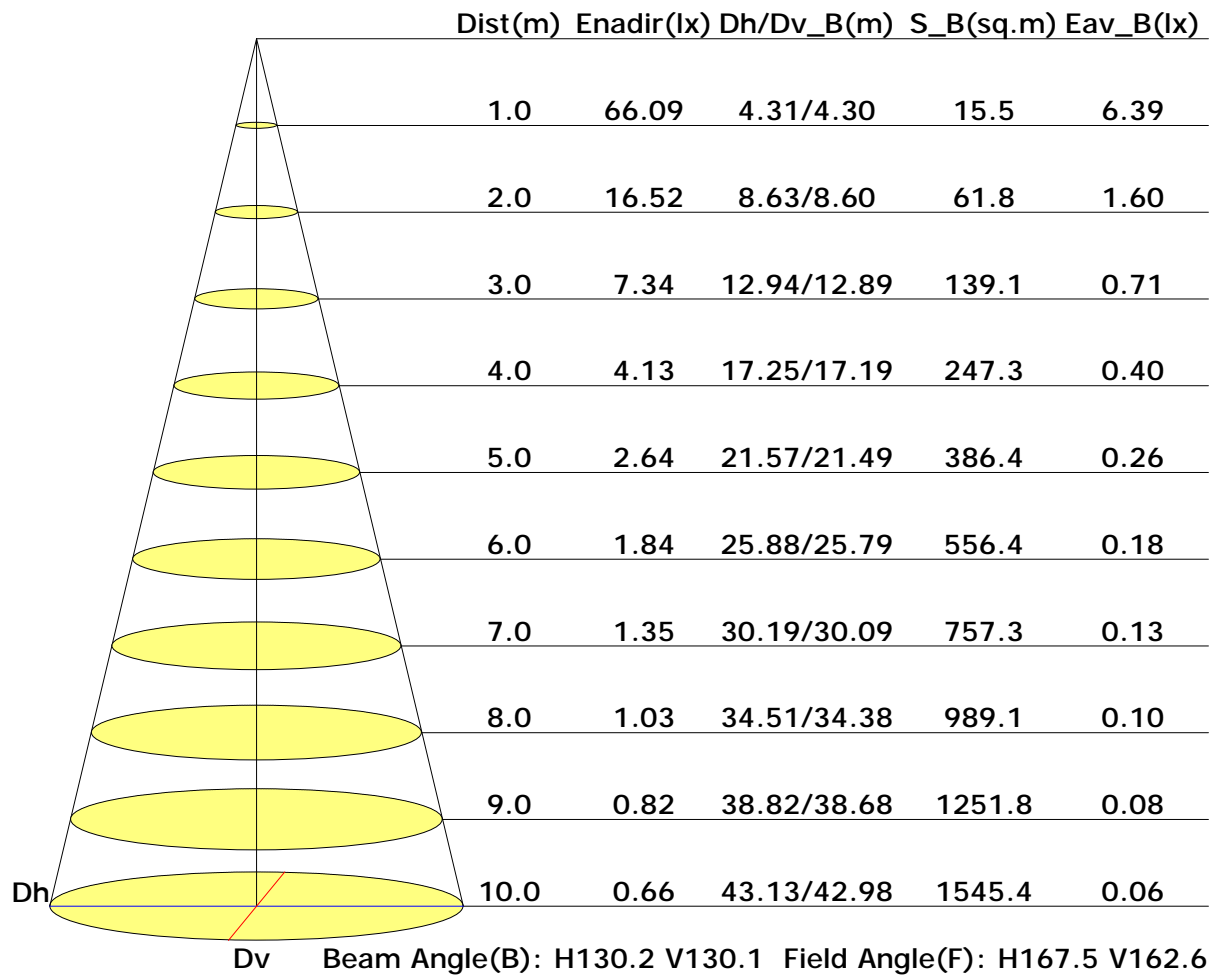
Test Device: GPM-1800B

Distance: 9.028 m

Humidity: 60%

Inspector:

Illuminance at a Distance



C Plane (°):0.0-360.0: 30.0

Test Lab:

Test Type: TYPE C

Temperature: 25

Operator: Aaron

Gamma Plane (°):0.0-180.0: 1.0

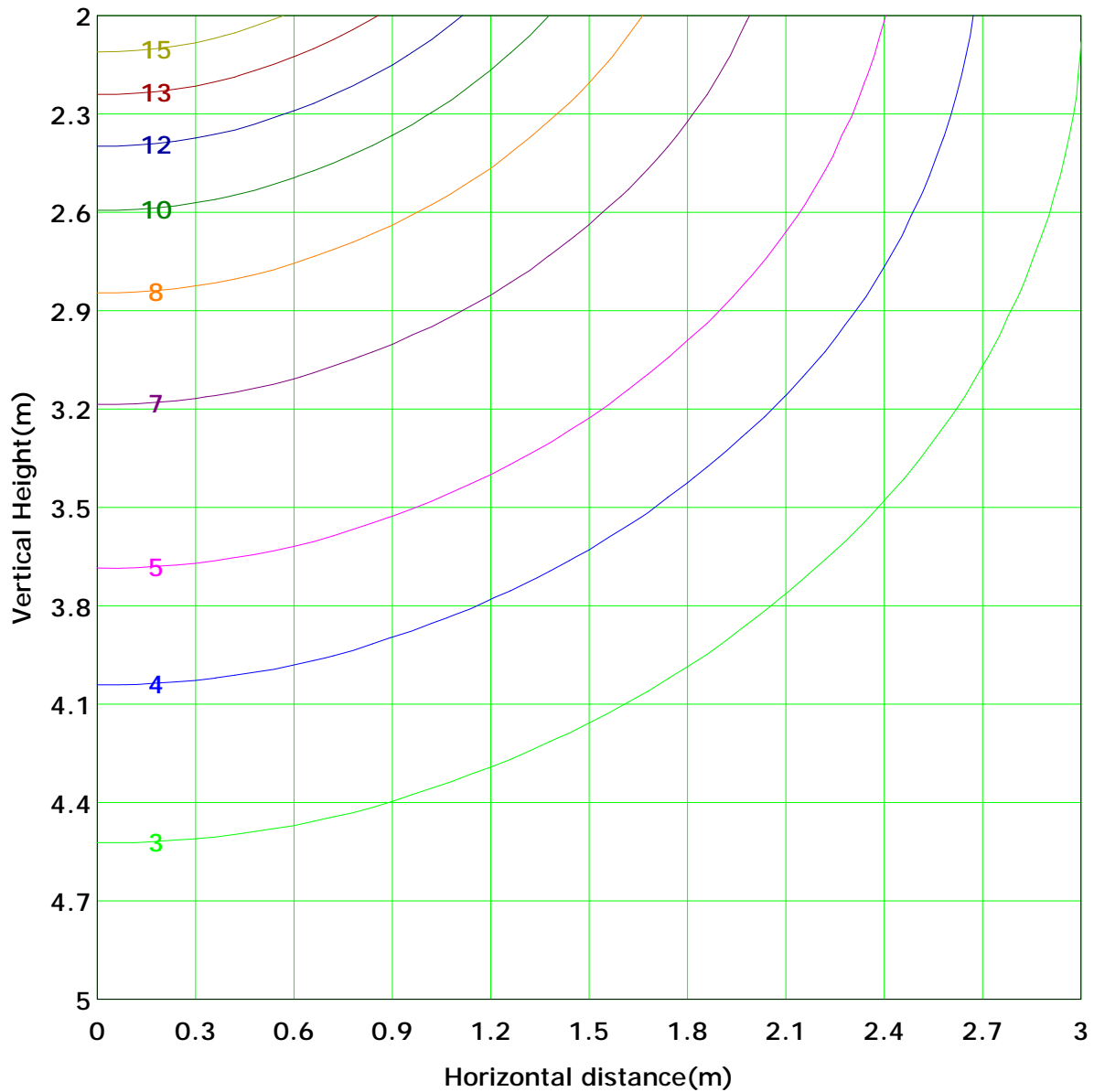
Test Device: GPM-1800B

Distance: 9.028 m

Humidity: 60%

Inspector:

Vertical IsoLux Plot



| | | |
|-----------------|------------------|------------------|
| Lowest(m): 2.0m | Highest(m): 5.0m | Max Lux: 16.5 lx |
| (10%): 1.7 lx | (20%): 3.3 lx | |
| (25%): 4.1 lx | (30%): 5.0 lx | |
| (40%): 6.6 lx | (50%): 8.3 lx | |
| (60%): 9.9 lx | (70%): 11.6 lx | |
| (80%): 13.2 lx | (90%): 14.9 lx | |

C Plane (°):0.0-360.0: 30.0

Test Lab:

Test Type: TYPE C

Temperature: 25

Operator: Aaron

Gamma Plane (°):0.0-180.0:1.0

Test Device: GPM-1800B

Distance: 9.028 m

Humidity: 60%

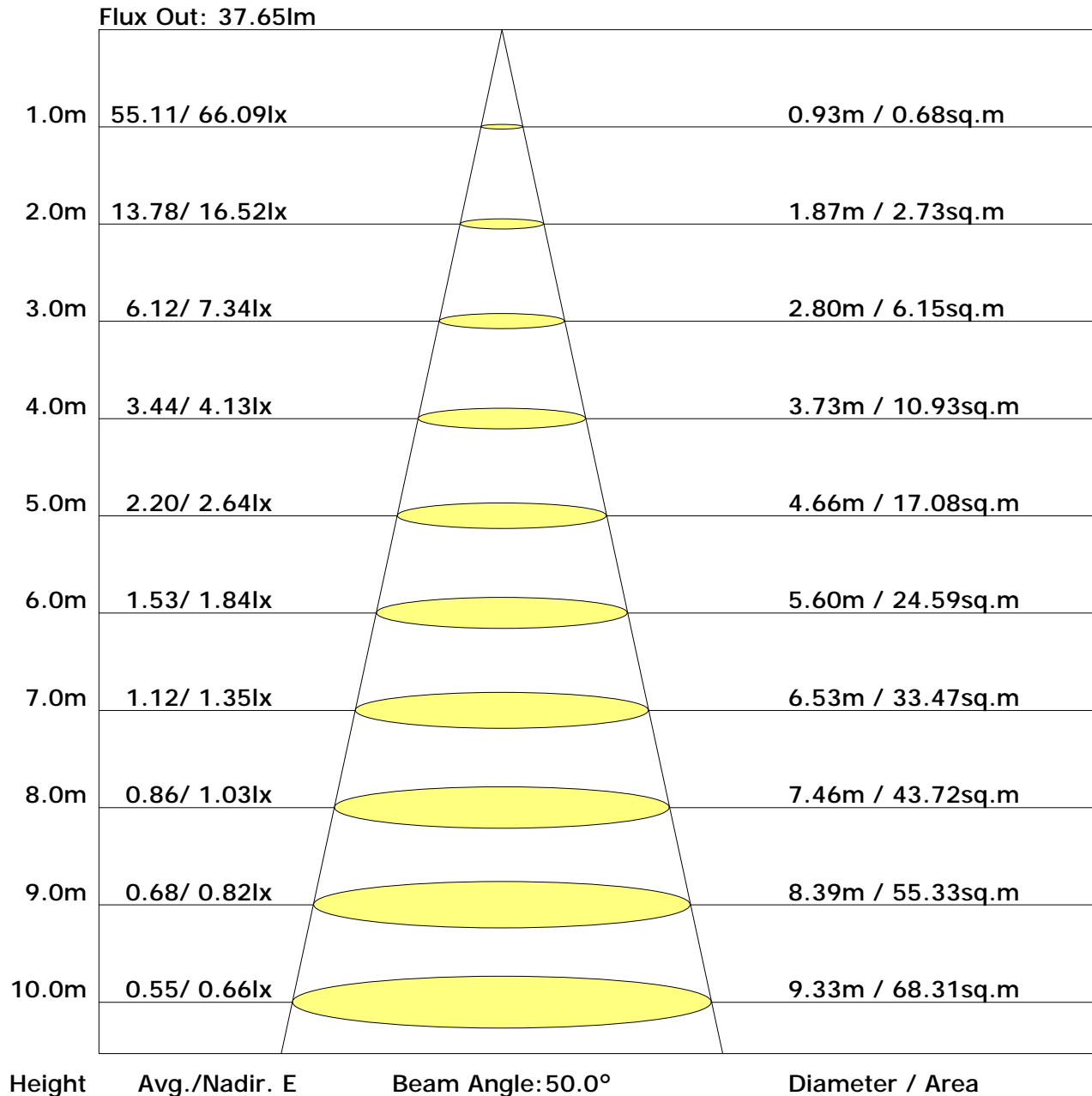
Inspector:

Unit: 1m

Horizontal plane

Gamma Plane (°):0.0-180.0:1.0
Test Device: GPM-1800B
Distance: 9.028 m
Humidity: 60%
Inspector:

The Average Illuminance Effective Figure



C Plane (°): 0.0-360.0: 30.0
 Test Lab:
 Test Type: TYPE C
 Temperature: 25
 Operator: Aaron

Gamma Plane (°): 0.0-180.0: 1.0
 Test Device: GPM-1800B
 Distance: 9.028 m
 Humidity: 60%
 Inspector:

UGR Table

| | | | | | | | | | | |
|------------------|------------------|------|------|------|------|----------------|------|------|------|------|
| Reflectance: | | | | | | | | | | |
| Ceiling (cavity) | 0.7 | 0.7 | 0.5 | 0.5 | 0.3 | 0.7 | 0.7 | 0.5 | 0.5 | 0.3 |
| Wall | 0.5 | 0.3 | 0.5 | 0.3 | 0.3 | 0.5 | 0.3 | 0.5 | 0.3 | 0.3 |
| Reference 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 | 26.9 | 28.6 | 27.3 | 28.9 | 29.3 | 26.6 | 28.3 | 27.0 | 28.6 | 29.0 |
| 3H | 29.1 | 30.6 | 29.5 | 30.9 | 31.3 | 28.4 | 30.0 | 28.8 | 30.3 | 30.7 |
| 4H | 29.9 | 31.3 | 30.3 | 31.7 | 32.1 | 29.0 | 30.5 | 29.4 | 30.8 | 31.2 |
| 6H | 30.5 | 31.9 | 30.9 | 32.2 | 32.6 | 29.3 | 30.7 | 29.7 | 31.1 | 31.5 |
| 8H | 30.7 | 32.0 | 31.1 | 32.4 | 32.8 | 29.4 | 30.7 | 29.8 | 31.1 | 31.5 |
| 12H | 30.8 | 32.1 | 31.3 | 32.5 | 32.9 | 29.4 | 30.6 | 29.8 | 31.0 | 31.5 |
| X=4H Y=2H | 27.6 | 29.1 | 28.0 | 29.4 | 29.8 | 27.4 | 28.8 | 27.8 | 29.2 | 29.6 |
| 3H | 30.0 | 31.2 | 30.4 | 31.6 | 32.0 | 29.4 | 30.6 | 29.8 | 31.0 | 31.5 |
| 4H | 30.9 | 32.1 | 31.4 | 32.5 | 32.9 | 30.1 | 31.2 | 30.6 | 31.7 | 32.1 |
| 6H | 31.7 | 32.7 | 32.1 | 33.1 | 33.6 | 30.6 | 31.5 | 31.0 | 32.0 | 32.5 |
| 8H | 31.9 | 32.8 | 32.4 | 33.3 | 33.8 | 30.7 | 31.6 | 31.1 | 32.0 | 32.5 |
| 12H | 32.1 | 32.9 | 32.6 | 33.4 | 33.9 | 30.7 | 31.5 | 31.2 | 32.0 | 32.5 |
| X=8H Y=4H | 31.3 | 32.2 | 31.7 | 32.6 | 33.1 | 30.5 | 31.5 | 31.0 | 31.9 | 32.4 |
| 6H | 32.1 | 32.9 | 32.6 | 33.4 | 33.9 | 31.1 | 31.9 | 31.6 | 32.4 | 32.9 |
| 8H | 32.4 | 33.1 | 32.9 | 33.6 | 34.1 | 31.3 | 32.0 | 31.8 | 32.5 | 33.0 |
| 12H | 32.7 | 33.3 | 33.2 | 33.8 | 34.3 | 31.3 | 31.9 | 31.8 | 32.4 | 33.0 |
| X=12H Y=4H | 31.3 | 32.1 | 31.8 | 32.6 | 33.1 | 30.6 | 31.4 | 31.1 | 31.9 | 32.4 |
| 6H | 32.2 | 32.9 | 32.7 | 33.3 | 33.9 | 31.2 | 31.9 | 31.8 | 32.4 | 32.9 |
| 8H | 32.5 | 33.1 | 33.0 | 33.6 | 34.2 | 31.4 | 32.0 | 31.9 | 32.5 | 33.1 |

Calculate in accordance with CIE 190:2010

C Plane (°):0.0-360.0: 30.0

Test Lab:

Test Type: TYPE C

Temperature: 25

Operator: Aaron

Gamma Plane (°):0.0-180.0:1.0

Test Device: GPM-1800B

Distance: 9.028 m

Humidity: 60%

Inspector:

Utilisation Factor Table(Floor cavity)

| Utilisation Factors UF(F) | | | SHR NOM = 1.50 | | | | | | | | |
|--|------|-------|----------------|------|------|------|------|------|------|------|------|
| Room Reflectance | | | Room Index(RI) | | | | | | | | |
| Ceiling | Wall | Floor | 0.75 | 1.00 | 1.25 | 1.50 | 2.00 | 2.50 | 3.00 | 4.00 | 5.00 |
| 0.70 | 0.50 | 0.20 | 0.55 | 0.64 | 0.72 | 0.78 | 0.85 | 0.90 | 0.94 | 0.99 | 1.02 |
| | 0.30 | | 0.47 | 0.56 | 0.64 | 0.70 | 0.79 | 0.84 | 0.89 | 0.95 | 0.98 |
| | 0.20 | | 0.42 | 0.50 | 0.58 | 0.64 | 0.73 | 0.79 | 0.84 | 0.91 | 0.95 |
| 0.50 | 0.50 | 0.20 | 0.54 | 0.62 | 0.69 | 0.75 | 0.82 | 0.87 | 0.90 | 0.95 | 0.98 |
| | 0.30 | | 0.47 | 0.55 | 0.63 | 0.68 | 0.76 | 0.82 | 0.86 | 0.91 | 0.95 |
| | 0.20 | | 0.41 | 0.49 | 0.57 | 0.63 | 0.72 | 0.77 | 0.82 | 0.88 | 0.92 |
| 0.30 | 0.50 | 0.20 | 0.52 | 0.60 | 0.67 | 0.72 | 0.79 | 0.83 | 0.87 | 0.91 | 0.94 |
| | 0.30 | | 0.46 | 0.54 | 0.61 | 0.67 | 0.74 | 0.79 | 0.83 | 0.88 | 0.91 |
| | 0.20 | | 0.41 | 0.49 | 0.56 | 0.62 | 0.70 | 0.76 | 0.80 | 0.85 | 0.89 |
| 0.00 | 0.00 | 0.00 | 0.39 | 0.46 | 0.54 | 0.59 | 0.66 | 0.72 | 0.76 | 0.81 | 0.84 |
| Rating: 10W Photometrically tested without ceiling board. Multiply UF values by service correction factors Calculate in accordance with CIBSE Technical Memorandum NO.5 1980 | | | | | | | | | | | |

C Plane (°):0.0-360.0: 30.0
 Test Lab:
 Test Type: TYPE C
 Temperature: 25
 Operator: Aaron

Gamma Plane (°):0.0-180.0: 1.0
 Test Device: GPM-1800B
 Distance: 9.028 m
 Humidity: 60%
 Inspector:

Utilisation Factor Table(Wall)

| Utilisation Factors UF(W) | | | SHR NOM = 1.50 | | | | | | | | |
|--|------|-------|----------------|------|------|------|------|------|------|------|------|
| Room Reflectance | | | Room Index(RI) | | | | | | | | |
| Ceiling | Wall | Floor | 0.75 | 1.00 | 1.25 | 1.50 | 2.00 | 2.50 | 3.00 | 4.00 | 5.00 |
| 0.70 | 0.50 | 0.20 | 1.01 | 0.87 | 0.74 | 0.64 | 0.51 | 0.43 | 0.37 | 0.29 | 0.23 |
| | 0.30 | | 0.85 | 0.74 | 0.64 | 0.57 | 0.47 | 0.39 | 0.34 | 0.27 | 0.22 |
| | 0.20 | | 0.73 | 0.65 | 0.57 | 0.51 | 0.42 | 0.36 | 0.32 | 0.25 | 0.21 |
| 0.50 | 0.50 | 0.20 | 0.98 | 0.83 | 0.71 | 0.62 | 0.49 | 0.44 | 0.35 | 0.27 | 0.22 |
| | 0.30 | | 0.83 | 0.72 | 0.62 | 0.55 | 0.45 | 0.38 | 0.33 | 0.26 | 0.21 |
| | 0.20 | | 0.72 | 0.64 | 0.56 | 0.50 | 0.41 | 0.35 | 0.31 | 0.25 | 0.20 |
| 0.30 | 0.50 | 0.20 | 0.95 | 0.80 | 0.68 | 0.59 | 0.47 | 0.39 | 0.34 | 0.26 | 0.21 |
| | 0.30 | | 0.81 | 0.71 | 0.61 | 0.54 | 0.44 | 0.37 | 0.32 | 0.25 | 0.20 |
| | 0.20 | | 0.71 | 0.63 | 0.55 | 0.49 | 0.40 | 0.34 | 0.30 | 0.24 | 0.20 |
| 0.00 | 0.00 | 0.00 | 0.61 | 0.54 | 0.46 | 0.41 | 0.33 | 0.28 | 0.24 | 0.19 | 0.15 |
| Rating: 10W Photometrically tested without ceiling board. Multiply UF values by service correction factors Calculate in accordance with CIBSE Technical Memorandum NO.5 1980 | | | | | | | | | | | |

C Plane (°): 0.0-360.0: 30.0
 Test Lab:
 Test Type: TYPE C
 Temperature: 25
 Operator: Aaron

Gamma Plane (°): 0.0-180.0: 1.0
 Test Device: GPM-1800B
 Distance: 9.028 m
 Humidity: 60%
 Inspector:

Utilisation Factor Table(Ceiling cavity)

| Utilisation Factors UF(C) | | | SHR NOM = 1.50 | | | | | | | | |
|--|------|-------|----------------|------|------|------|------|------|------|------|------|
| Room Reflectance | | | Room Index(RI) | | | | | | | | |
| Ceiling | Wall | Floor | 0.75 | 1.00 | 1.25 | 1.50 | 2.00 | 2.50 | 3.00 | 4.00 | 5.00 |
| 0.70 | 0.50 | 0.20 | 0.17 | 0.19 | 0.19 | 0.20 | 0.21 | 0.21 | 0.22 | 0.22 | 0.23 |
| | 0.30 | | 0.10 | 0.12 | 0.13 | 0.14 | 0.16 | 0.17 | 0.18 | 0.19 | 0.20 |
| | 0.20 | | 0.05 | 0.07 | 0.08 | 0.09 | 0.12 | 0.13 | 0.14 | 0.16 | 0.17 |
| 0.50 | 0.50 | 0.20 | 0.17 | 0.18 | 0.19 | 0.19 | 0.20 | 0.21 | 0.21 | 0.21 | 0.22 |
| | 0.30 | | 0.10 | 0.12 | 0.13 | 0.14 | 0.15 | 0.16 | 0.17 | 0.18 | 0.19 |
| | 0.20 | | 0.05 | 0.07 | 0.08 | 0.09 | 0.11 | 0.13 | 0.14 | 0.16 | 0.17 |
| 0.30 | 0.50 | 0.20 | 0.16 | 0.17 | 0.18 | 0.19 | 0.19 | 0.20 | 0.20 | 0.20 | 0.21 |
| | 0.30 | | 0.10 | 0.11 | 0.12 | 0.13 | 0.15 | 0.16 | 0.17 | 0.18 | 0.18 |
| | 0.20 | | 0.05 | 0.07 | 0.08 | 0.09 | 0.11 | 0.12 | 0.14 | 0.15 | 0.16 |
| 0.00 | 0.00 | 0.00 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| Rating: 10W Photometrically tested without ceiling board. Multiply UF values by service correction factors Calculate in accordance with CIBSE Technical Memorandum NO.5 1980 | | | | | | | | | | | |

C Plane (°):0.0-360.0: 30.0

Test Lab:

Test Type: TYPE C

Temperature: 25

Operator: Aaron

Gamma Plane (°):0.0-180.0:1.0

Test Device: GPM-1800B

Distance: 9.028 m

Humidity: 60%

Inspector: