

Report No.: GFB1804281876

Test Time: 2018-11-17 16:14

Luminaire Property

Luminaire Manufacturer:
 Luminaire Description: Sunlike-20W
 Voltage: 32.64 V
 Power: 20.56 W

Lamp Catalog: LED
 Current: 0.63 A
 Power Factor: 0.493

Photometric Results

CIE Class: Direct
 Measurement Flux: 3707.2 lm
 Downward Ratio: 98%
 Horizontal Diffuse Angle(50%): H109.8
 Vertical Diffuse Angle(50%): V153.8
 Luminaire Efficacy Rating (LER): 180.36
 Max. Intensity: 2403.08 cd
 S/MH(C0/C180): 1.73

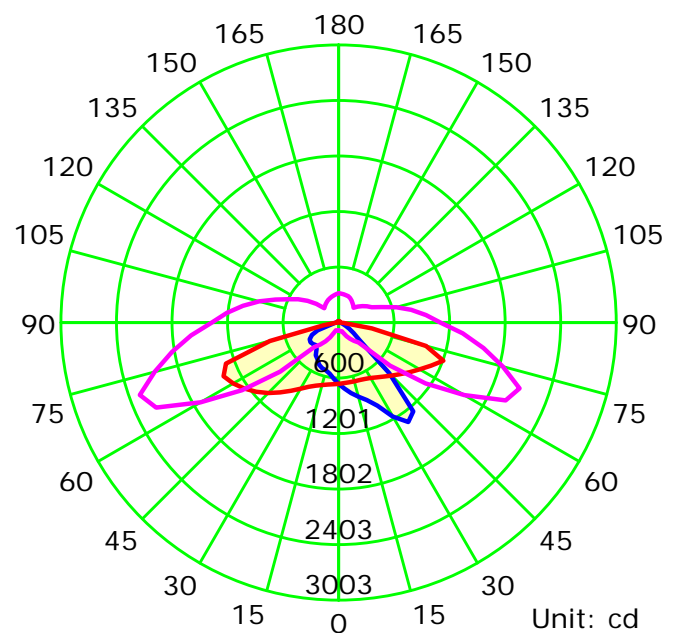
Total Rated Lamp Lumens: 3707.2 lm
 Efficiency: 100%
 Upward Ratio: 2%

Central Intensity: 663.7 cd
 Pos of Max. Intensity: H292.5 V65
 S/MH(C90/C270): 2.01

Picture Of Luminaire



Luminous Intensity Distribution Curve



— C0-C180 — C90-C270 — G65

C Plane (°):0.0-360.0: 22.5

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:5.0

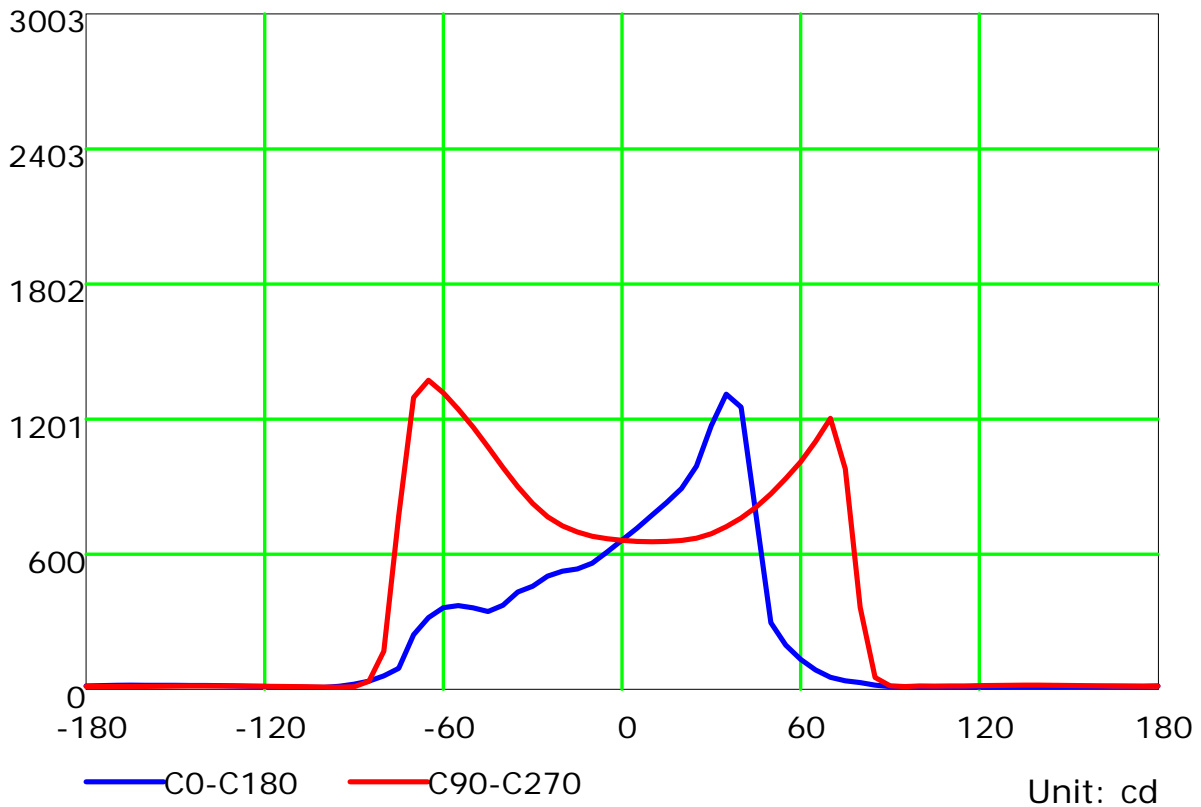
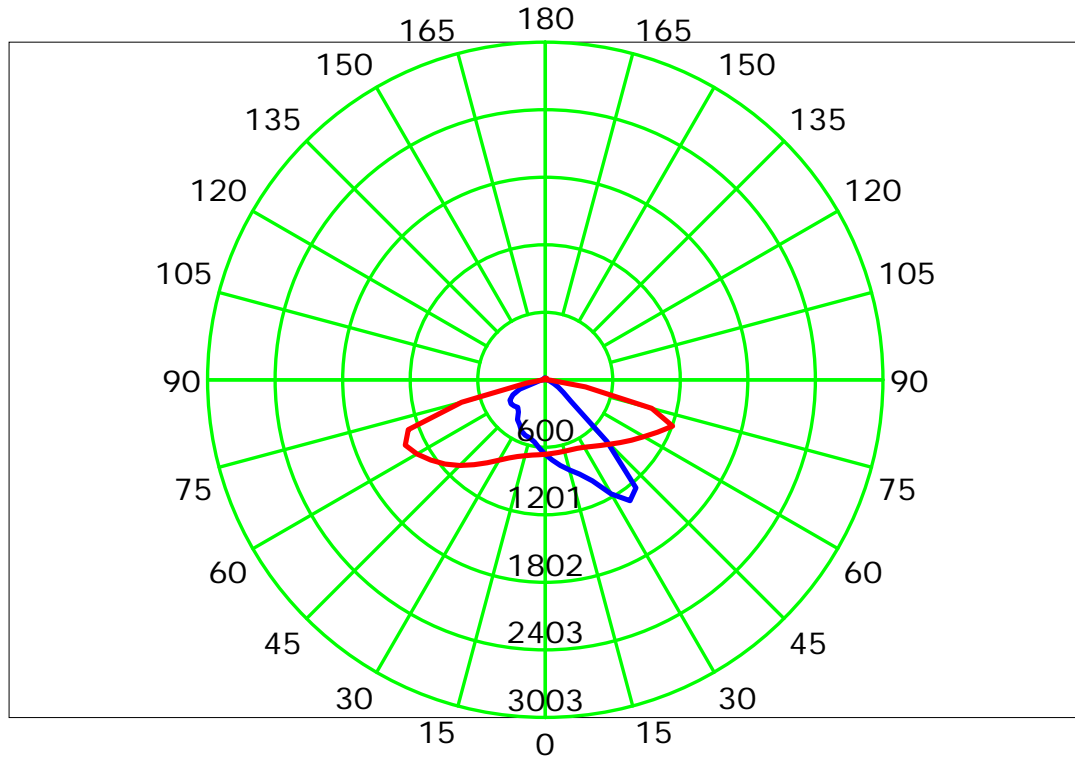
Test Device: GPM-1600L

Distance: 8.154 m

Humidity:

Inspector:

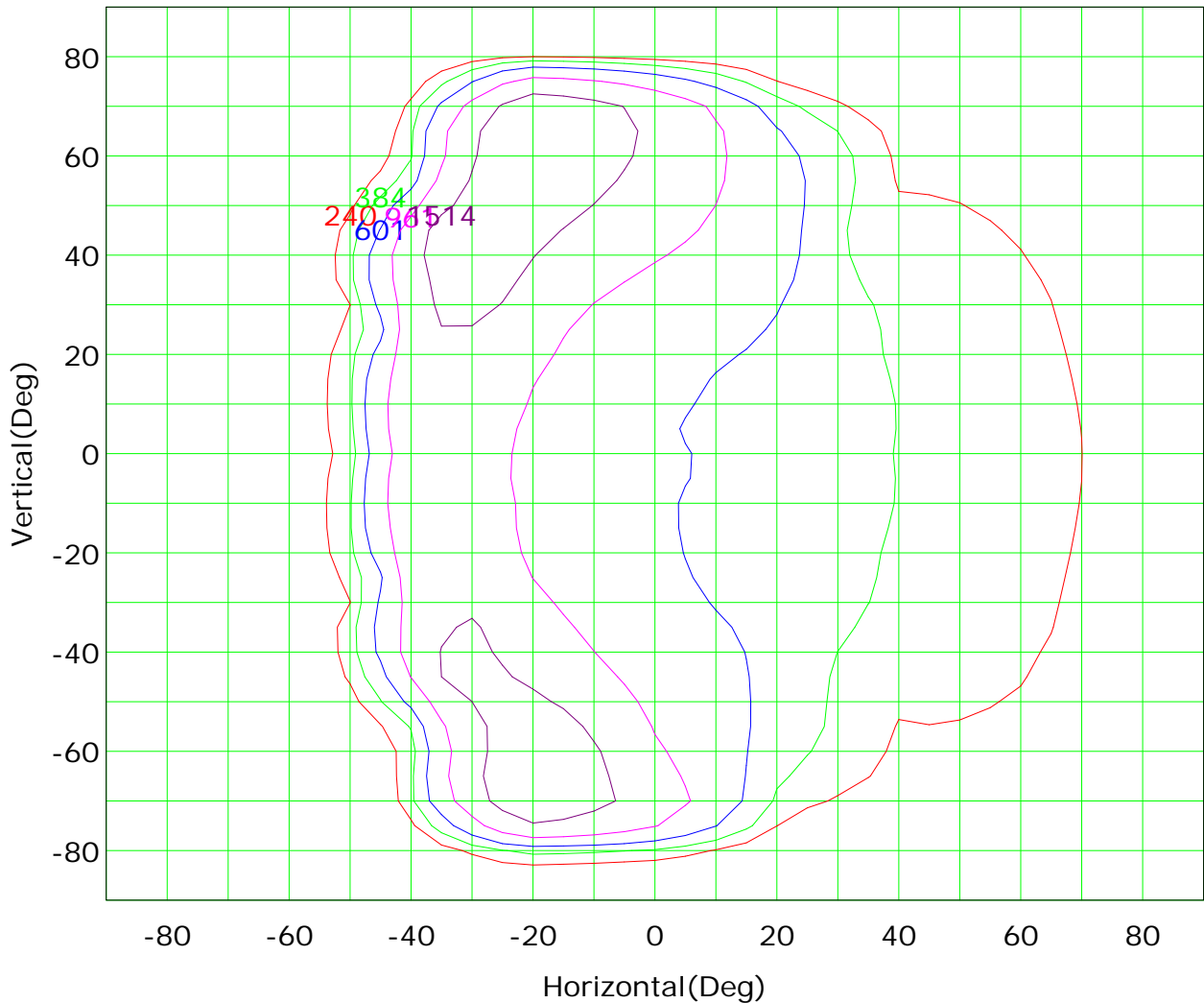
Luminous Intensity Distribution Curve



C Plane (°):0.0-360.0: 22.5
 Test Lab:
 Test Type: TYPE C
 Temperature:
 Operator:

Gamma Plane (°):0.0-180.0:5.0
 Test Device: GPM-1600L
 Distance: 8.154 m
 Humidity:
 Inspector:

Isocandela (rectangle)



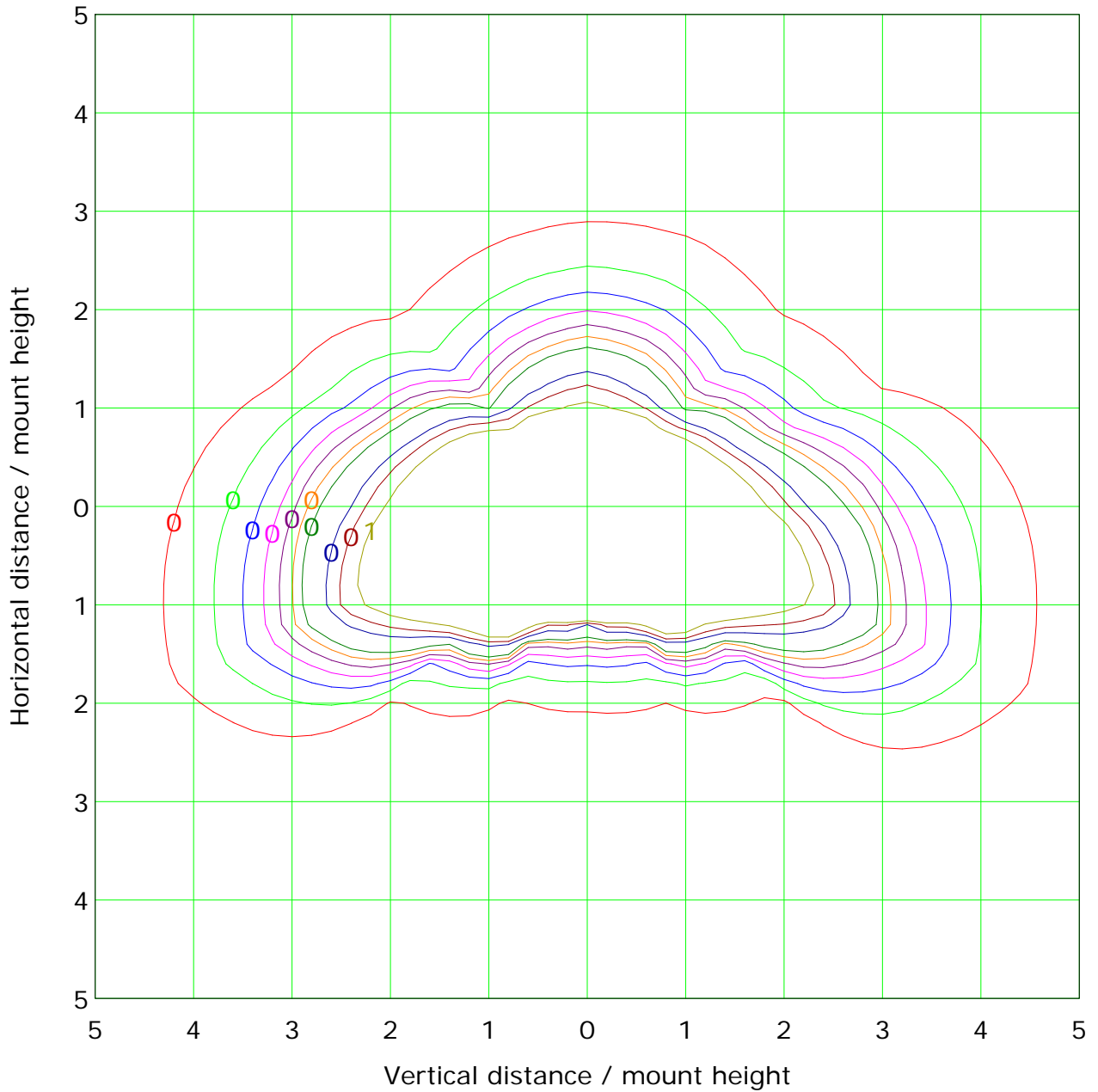
Imax (100%): 2403 cd

- | | |
|--|---|
| <ul style="list-style-type: none"> — (10%): 240 cd — (25%): 601 cd — (63%): 1514 cd | <ul style="list-style-type: none"> — (16%): 384 cd — (40%): 961 cd — (100%): 2403 cd |
|--|---|

C Plane (°):0.0-360.0: 22.5
 Test Lab:
 Test Type: TYPE C
 Temperature:
 Operator:

Gamma Plane (°):0.0-180.0:5.0
 Test Device: GPM-1600L
 Distance: 8.154 m
 Humidity:
 Inspector:

IsoLux Plot

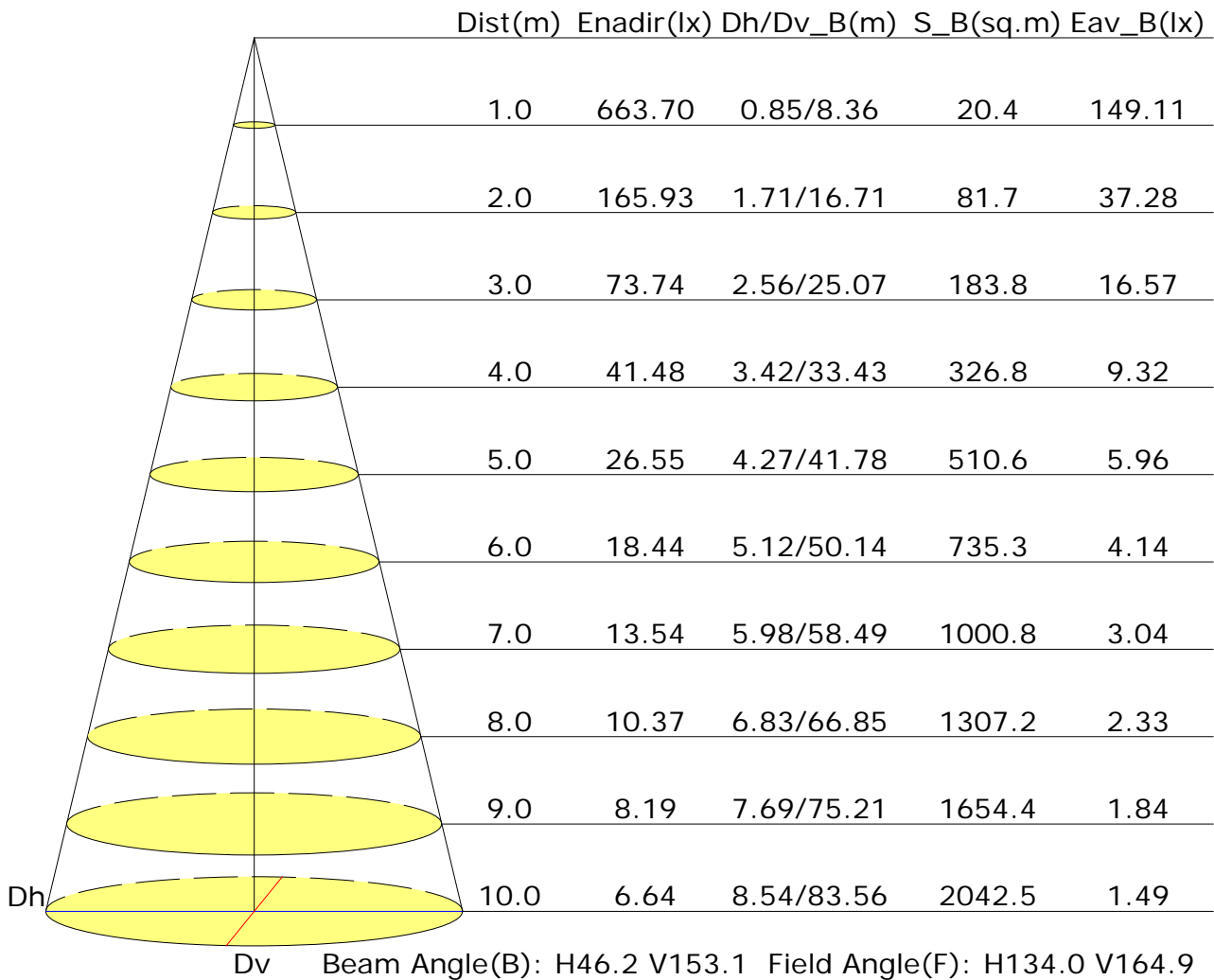


Mounting Height: 15.0m		Max Lux(100%): 3.4 lx	
— (1%):	0.0 lx	— (2%):	0.1 lx
— (3%):	0.1 lx	— (4%):	0.1 lx
— (5%):	0.2 lx	— (6%):	0.2 lx
— (7%):	0.2 lx	— (10%):	0.3 lx
— (12%):	0.4 lx	— (15%):	0.5 lx

C Plane (°):0.0-360.0: 22.5
 Test Lab:
 Test Type: TYPE C
 Temperature:
 Operator:

Gamma Plane (°):0.0-180.0:5.0
 Test Device: GPM-1600L
 Distance: 8.154 m
 Humidity:
 Inspector:

Illuminance at a Distance



C Plane (°):0.0-360.0: 22.5

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:5.0

Test Device: GPM-1600L

Distance: 8.154 m

Humidity:

Inspector:

Area Flux Table

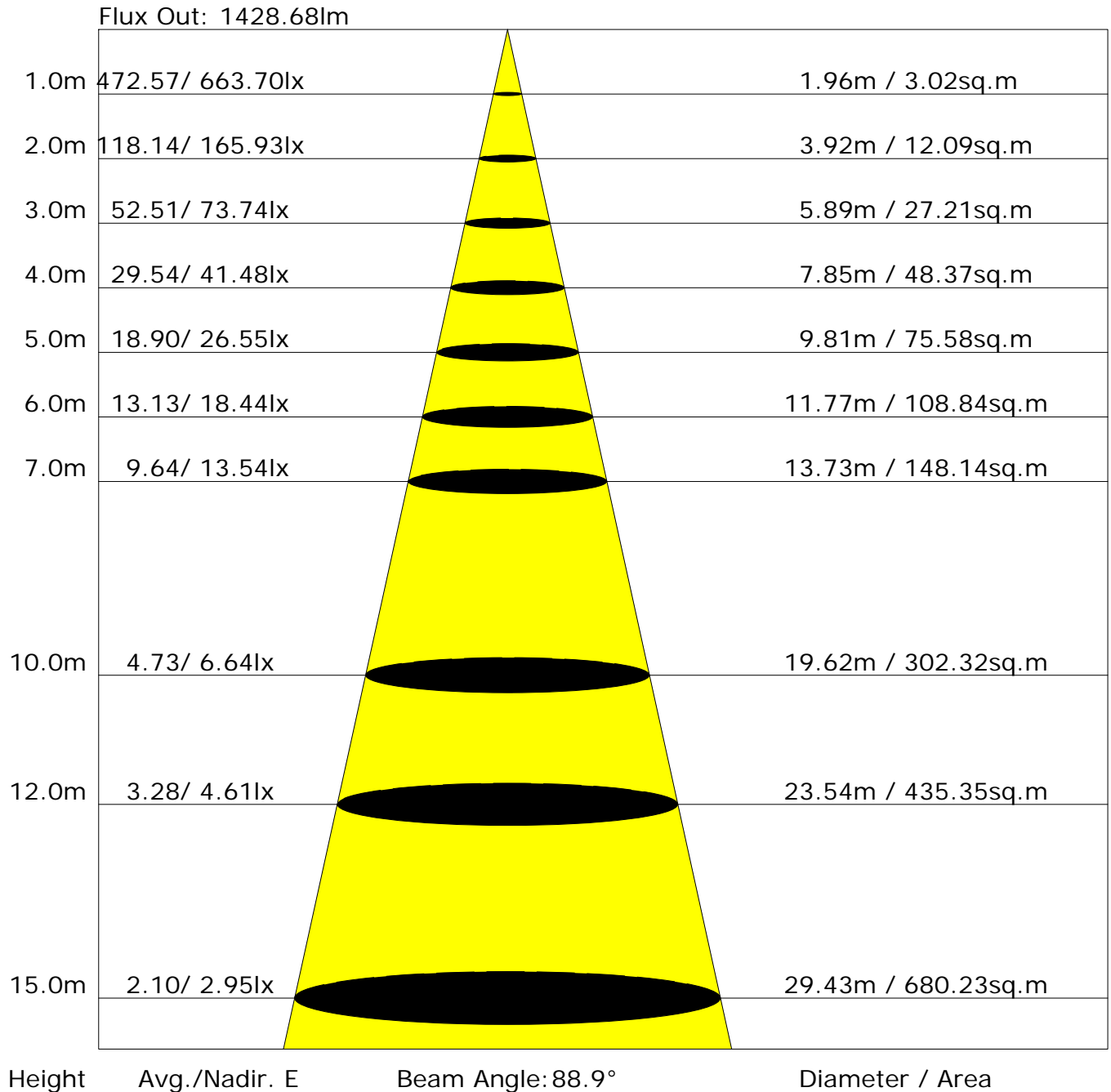
Unit: lm

Vertical plane		Horizontal plane																			
Flux(T)	Flux(E)	-90	-80	-70	-60	-50	-40	-30	-20	-10	0	10	20	30	40	50	60	70	80	90	
0.1	0.0	0.1	0.2	0.3	0.4	0.6	0.7	0.9	1.3	1.7	2.2	2.5	2.2	1.1	0.4	0.3	0.2	0.1	0.0	15.3	0.0
0.1	0.0	0.1	0.2	0.5	0.9	1.4	2.8	5.2	11.2	19.2	26.2	30.2	24.0	8.9	1.4	0.5	0.3	0.1	0.0	133.2	118.1
0.1	0.1	0.3	0.9	1.9	3.1	6.9	13.4	23.6	35.4	48.1	60.5	51.0	20.8	3.3	1.1	0.4	0.2	0.0	271.1	1258.7	
0.1	0.1	0.4	1.5	3.2	4.8	8.3	16.2	25.4	33.9	44.2	56.9	52.5	26.7	6.7	1.8	0.5	0.2	0.0	283.6	270.3	
0.1	0.1	0.6	2.2	4.4	5.9	8.0	15.9	24.2	30.1	36.4	44.3	50.2	40.4	14.1	2.6	0.7	0.2	0.1	280.3	273.2	
0.1	0.1	0.7	2.8	5.2	6.8	9.2	15.2	21.7	25.8	29.6	35.2	45.0	41.2	16.5	2.8	0.8	0.3	0.1	258.8	253.2	
0.1	0.1	0.9	3.4	5.8	7.2	10.2	14.4	18.6	21.9	24.9	29.2	36.5	36.5	14.5	3.1	1.0	0.3	0.1	228.4	222.7	
0.1	0.1	1.0	3.7	6.1	7.4	10.6	14.2	16.6	19.6	22.5	26.3	31.0	34.1	17.4	3.8	1.1	0.3	0.1	215.8	210.7	
0.1	0.1	1.0	4.0	6.3	7.6	10.7	14.0	16.1	18.4	21.8	24.8	28.4	32.2	17.9	3.8	1.2	0.3	0.1	208.8	204.0	
0.1	0.1	1.1	4.0	6.3	7.6	10.6	13.8	15.8	18.3	21.2	24.2	27.8	31.6	17.9	3.9	1.2	0.3	0.1	205.8	201.1	
0.1	0.1	1.0	3.8	6.1	7.4	10.4	13.7	15.9	18.0	21.5	23.8	28.5	32.5	17.7	3.8	1.2	0.3	0.1	205.9	200.9	
0.1	0.1	0.9	3.6	5.9	7.1	10.0	13.6	16.2	18.7	22.4	25.6	31.0	33.1	14.6	3.2	1.1	0.3	0.1	207.3	201.6	
0.1	0.1	0.8	3.1	5.5	6.7	8.9	13.3	17.1	20.4	24.4	29.6	37.2	35.4	14.8	2.9	0.9	0.3	0.1	221.5	216.1	
0.1	0.1	0.7	2.5	4.8	6.0	7.3	12.5	17.9	22.6	28.5	36.6	42.4	34.3	12.0	2.5	0.7	0.3	0.1	231.9	225.6	
0.1	0.1	0.5	1.9	3.7	5.1	7.1	11.7	18.1	25.3	35.4	49.3	46.1	22.8	5.6	1.8	0.6	0.2	0.0	235.2	221.7	
0.1	0.1	0.4	1.1	2.4	3.7	6.0	9.5	17.5	28.4	41.6	56.1	49.3	20.7	3.2	1.2	0.4	0.2	0.0	241.9	227.0	
0.1	0.1	0.3	0.6	1.2	1.9	3.0	4.7	11.7	21.9	31.2	37.3	30.9	12.0	1.9	0.7	0.3	0.2	0.0	159.7	144.2	
0.1	0.1	0.2	0.4	0.5	0.7	0.9	1.0	1.9	3.1	4.1	4.6	3.9	1.9	0.6	0.3	0.2	0.1	0.0	24.5	7.7	
1.7	11.1	40.3	70.7	91.0	131.5	203.3	290.5	382.7	486.2	597.0	617.8	466.4	180.6	40.0	12.8	4.3	0.9	0.0	3629		
0.0	0.0	24.4	55.7	73.5	118.9	195.0	284.9	378.1	481.8	592.7	613.2	461.0	167.4	10.3	0.0	0.0	0.0	0.0	0.0	3457	

C Plane (°): 0.0-360.0: 22.5
 Test Lab:
 Test Type: TYPE C
 Temperature:
 Operator:

Gamma Plane (°): 0.0-180.0: 5.0
 Test Device: GPM-1600L
 Distance: 8.154 m
 Humidity:
 Inspector:

The Average Illuminance Effective Figure



C Plane (°):0.0-360.0: 22.5
 Test Lab:
 Test Type: TYPE C
 Temperature:
 Operator:

Gamma Plane (°):0.0-180.0:5.0
 Test Device: GPM-1600L
 Distance: 8.154 m
 Humidity:
 Inspector:

UGR Table

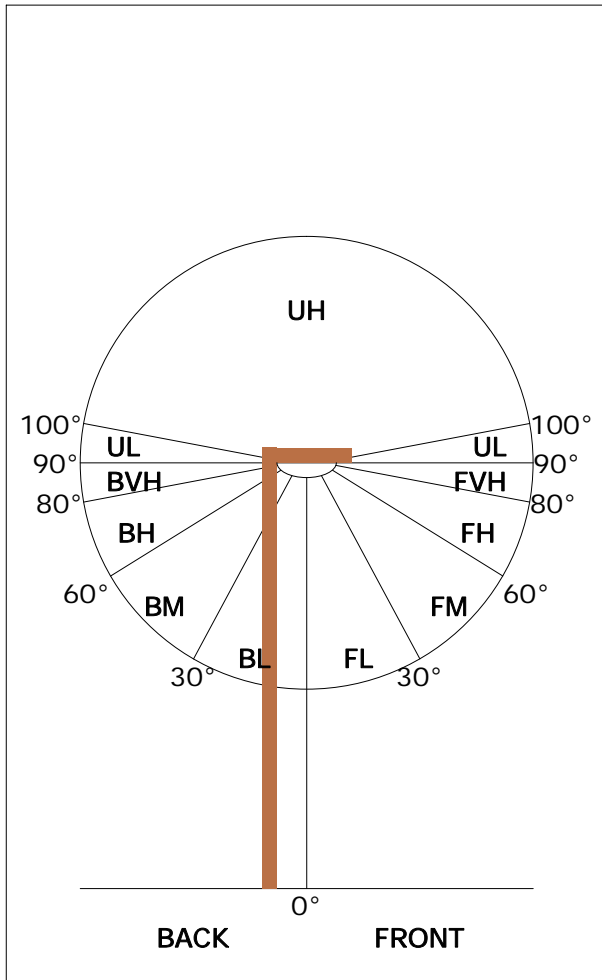
Reflectance:										
Ceiling (cavity)	0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall	0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions	Viewed crosswise					Viewed endwise				
X=2H Y=2H	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$
3H	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$
4H	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$
6H	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$
8H	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$
12H	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$
X=4H Y=2H	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$
3H	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$
4H	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$
6H	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$
8H	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$
12H	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$
X=8H Y=4H	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$
6H	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$
8H	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$
12H	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$
X=12H Y=4H	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$
6H	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$
8H	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$	-1.\$
Variations with the observer position at spacings:										
S=1.0H	-1.\$/-1.\$					-1.\$/-1.\$				
S=1.5H	-1.\$/-1.\$					-1.\$/-1.\$				
S=2.0H	-1.\$/-1.\$					-1.\$/-1.\$				

Calculate in accordance with CIE Pub.117. The table is revised with 3707Im ($8\log(F/F_0) = 4.6$).

C Plane (°):0.0-360.0: 22.5
 Test Lab:
 Test Type: TYPE C
 Temperature:
 Operator:

Gamma Plane (°):0.0-180.0:5.0
 Test Device: GPM-1600L
 Distance: 8.154 m
 Humidity:
 Inspector:

FLUX DISTRIBUTION TABLE BASED ON THE IESNA LUMINAIRE CLASSIFICATION SYSTEM



ZONE	LUMENS	% LAMP LUMENS
FORWARD LIGHT	2406	64.9
FL (0°-30°)	352	9.5
FM (30°-60°)	1328	35.8
FH (60°-80°)	692	18.7
FVH (80°-90°)	34	0.9
BACK LIGHT	1224	33.0
BL (0°-30°)	244	6.6
BM (30°-60°)	604	16.3
BH (60°-80°)	351	9.5
BVH (80°-90°)	25	0.7
UP LIGHT	78	2.1
UL (90°-100°)	13	0.3
UH (100°-180°)	65	1.8
TRAPPED LIGHT	NA	NA

BUG(Backlight,Uplight,Glare) Rating Base On TM-15-07	
Asymmetrical Luminaire Types (Type I,II,III,IV)	B1 U2 G1
Quadrilateral Symmetrical Luminaire Types (Type V,Area Light)	B1 U2 G1

C Plane (°):0.0-360.0: 22.5
 Test Lab:
 Test Type: TYPE C
 Temperature:
 Operator:

Gamma Plane (°):0.0-180.0:5.0
 Test Device: GPM-1600L
 Distance: 8.154 m
 Humidity:
 Inspector:

Candlepower Table

Unit: cd

GVC	C0.0	C22.5	C45.0	C67.5	C90.0	C112.5	C135.0	C157.5	C180.0	C202.5
G0.0	663.7	661.0	629.1	661.8	663.3	633.5	665.2	666.2	663.7	661.0
G5.0	716.7	708.9	662.8	677.8	658.4	610.5	624.1	615.1	611.3	616.0
G10.0	774.3	758.7	697.6	696.9	657.0	589.8	585.8	566.7	561.3	571.8
G15.0	830.8	811.0	737.4	719.8	658.2	571.8	554.6	536.9	535.8	549.7
G20.0	893.5	869.1	783.0	748.5	662.5	558.3	541.2	523.9	525.6	543.6
G25.0	992.3	951.6	841.8	783.9	672.6	557.5	538.6	513.5	503.7	533.3
G30.0	1173.7	1106.4	929.5	838.8	692.4	567.9	532.5	474.4	458.8	488.4
G35.0	1313.1	1304.9	1086.4	914.8	723.5	584.7	497.5	443.5	433.0	458.7
G40.0	1255.3	1375.0	1341.7	1022.0	762.3	600.9	463.8	398.8	374.1	401.3
G45.0	776.2	1212.9	1591.6	1176.4	810.5	596.4	422.3	332.5	346.4	335.1
G50.0	296.5	554.5	1706.2	1423.4	869.2	576.3	320.0	323.1	362.4	330.2
G55.0	196.9	245.1	1494.8	1776.6	937.5	548.8	256.9	333.0	372.3	332.9
G60.0	133.6	162.9	781.4	2099.5	1011.8	493.4	246.2	330.6	363.3	318.2
G65.0	86.4	103.2	304.3	2205.3	1102.4	417.6	229.0	302.6	319.1	276.6
G70.0	53.8	71.7	162.1	2252.9	1205.7	340.2	193.8	243.3	243.1	209.1
G75.0	38.4	44.6	108.2	1730.3	980.2	210.3	139.9	166.0	93.8	133.6
G80.0	30.1	28.9	52.5	494.6	364.3	77.8	77.1	80.0	60.5	60.8
G85.0	19.1	23.0	29.0	112.7	52.9	33.0	33.0	35.0	36.8	29.5
G90.0	12.4	12.2	10.8	31.1	16.4	18.6	19.1	22.3	23.1	19.6
G95.0	10.3	7.9	7.0	9.0	12.5	13.2	12.5	13.7	13.9	10.7
G100.0	9.9	7.3	6.9	11.4	15.2	14.2	11.9	9.9	8.8	8.1
G105.0	10.1	7.5	7.2	10.3	14.5	14.8	11.9	10.0	9.1	8.6
G110.0	10.0	7.5	7.3	10.7	15.2	15.3	13.3	10.1	10.4	9.5
G115.0	9.9	7.7	8.0	11.2	15.5	15.7	14.5	11.8	11.9	10.5
G120.0	10.2	7.9	8.9	12.0	16.4	16.3	15.5	13.0	12.9	11.6
G125.0	10.9	8.6	9.8	12.6	17.2	16.8	16.2	14.0	13.8	12.7
G130.0	11.6	9.1	10.4	13.2	17.9	17.5	16.5	15.2	15.3	13.9
G135.0	12.2	9.4	10.8	13.6	18.6	18.5	16.7	15.7	16.7	14.6
G140.0	12.5	9.8	11.1	13.8	18.9	19.3	16.1	15.8	17.5	14.9
G145.0	12.8	10.1	11.2	13.8	18.5	19.5	16.3	15.9	17.8	15.2
G150.0	12.9	10.4	11.3	13.7	17.6	19.1	16.5	16.5	17.8	15.8
G155.0	13.0	10.4	11.5	13.6	16.7	18.4	16.7	17.3	18.0	16.4
G160.0	13.3	10.4	11.9	12.9	15.9	17.5	16.5	17.6	18.4	16.6
G165.0	13.6	10.9	12.3	13.0	15.3	16.5	16.1	17.5	18.5	16.5
G170.0	13.7	11.6	12.7	13.0	14.6	15.5	15.4	17.0	18.1	16.0
G175.0	13.9	12.3	13.1	13.0	14.2	14.6	14.2	15.6	16.9	15.0
G180.0	15.2	13.1	13.8	13.2	13.9	13.9	13.3	14.3	15.1	13.9

C Plane (°):0.0-360.0: 22.5

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:5.0

Test Device: GPM-1600L

Distance: 8.154 m

Humidity:

Inspector:

Candlepower Table (Continue 1)

Unit: cd

GVC	C225.0	C247.5	C270.0	C292.5	C315.0	C337.5	C360.0			
G0.0	629.1	661.8	663.3	633.5	665.2	666.2	663.7			
G5.0	597.3	647.0	670.1	658.8	708.0	721.0	716.7			
G10.0	567.9	635.2	680.7	688.7	755.7	774.6	774.3			
G15.0	551.2	630.2	700.0	728.7	808.8	830.9	830.8			
G20.0	551.5	637.1	727.1	779.0	877.3	895.5	893.5			
G25.0	562.1	661.7	767.9	845.1	963.6	995.5	992.3			
G30.0	561.3	701.1	826.5	935.3	1093.3	1174.6	1173.7			
G35.0	523.8	750.3	901.8	1058.1	1316.4	1386.2	1313.1			
G40.0	491.0	792.2	986.8	1215.8	1643.7	1438.8	1255.3			
G45.0	431.1	806.3	1078.0	1427.2	1920.5	1192.0	776.2			
G50.0	336.3	802.9	1166.0	1697.7	2024.2	508.5	296.5			
G55.0	268.1	786.0	1245.9	2006.5	1752.3	246.3	196.9			
G60.0	250.5	735.0	1318.6	2371.4	963.5	152.0	133.6			
G65.0	220.7	648.8	1374.6	2403.1	375.1	89.1	86.4			
G70.0	172.2	494.8	1298.2	2207.6	194.2	62.8	53.8			
G75.0	109.7	235.5	771.8	1322.4	94.9	41.1	38.4			
G80.0	53.5	75.6	170.1	275.8	39.9	28.1	30.1			
G85.0	28.7	29.6	36.2	65.5	18.2	22.0	19.1			
G90.0	16.0	15.7	11.4	15.5	7.5	10.1	12.4			
G95.0	10.3	10.8	9.5	6.0	5.3	6.8	10.3			
G100.0	9.6	11.4	10.3	6.8	5.3	6.3	9.9			
G105.0	10.6	12.5	11.5	7.7	5.8	6.4	10.1			
G110.0	12.2	13.3	12.5	8.6	6.1	6.3	10.0			
G115.0	13.4	13.7	13.3	9.4	6.8	7.0	9.9			
G120.0	14.5	14.3	14.1	10.1	7.7	7.4	10.2			
G125.0	15.1	14.7	14.3	10.9	8.5	8.1	10.9			
G130.0	15.4	15.6	15.0	11.4	9.0	8.6	11.6			
G135.0	15.6	16.7	15.6	11.6	9.3	8.6	12.2			
G140.0	15.7	17.4	15.6	11.7	9.6	9.1	12.5			
G145.0	15.9	17.3	15.1	11.7	9.8	9.5	12.8			
G150.0	16.2	16.9	14.5	11.8	10.1	9.6	12.9			
G155.0	16.4	16.4	13.9	12.0	10.6	9.9	13.0			
G160.0	16.3	15.8	13.5	12.3	11.1	10.4	13.3			
G165.0	16.0	15.2	13.3	12.5	11.7	11.2	13.6			
G170.0	15.4	14.7	13.3	13.0	12.4	12.0	13.7			
G175.0	14.6	14.3	13.3	13.4	13.2	12.8	13.9			
G180.0	13.8	13.9	13.3	13.9	14.0	13.6	15.2			

C Plane (°):0.0-360.0: 22.5

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:5.0

Test Device: GPM-1600L

Distance: 8.154 m

Humidity:

Inspector: