



Report No.: ARK-2-40K-010-13

Test Time: 2020/9/12 11:34

## Luminaire Property

Luminaire Manufacturer: Rayhil

Luminaire Category: Anchor

Luminaire Description:

Luminous Length (mm): 605

Luminous Height (mm): 34

Current: 0.738 A

Power Factor: 1.000

Luminous Width (mm): 50

Voltage: 110 V

Power: 17.71 W

## Photometric Results

CIE Class: Direct

Measurement Flux: 1935.4 lm

Downward Ratio: 96%

Horizontal Diffuse Angle(10%,50%): H27,H13.7

Vertical Diffuse Angle(10%,50%): V27.2,V13.7

Luminaire Efficacy Rating (LER): 109

Max. Intensity: 21601.12 cd

Total Rated Lamp Lumens: 1935.4 lm

Efficiency: 100%

Upward Ratio: 4%

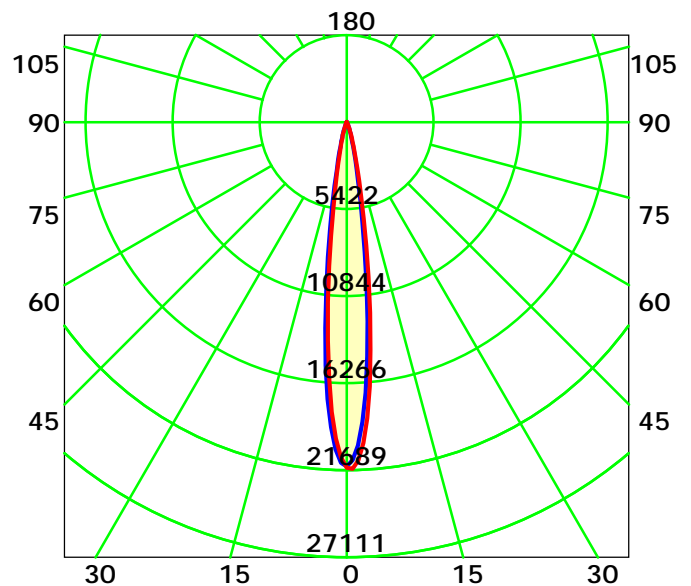
Central Intensity: 21437.18 cd

Pos of Max. Intensity: H90 V1

Picture Of Luminaire



Luminous Intensity Distribution Curve



Average Diffuse Angle(50%): 13.7° Unit: cd

— C0-C180 — C90-C270

C Plane (°):0.0-360.0: 30.0

Test Lab:

Test Type: TYPE C

Temperature: 25

Operator: Kerr

Gamma Plane (°):0.0-180.0: 1.0

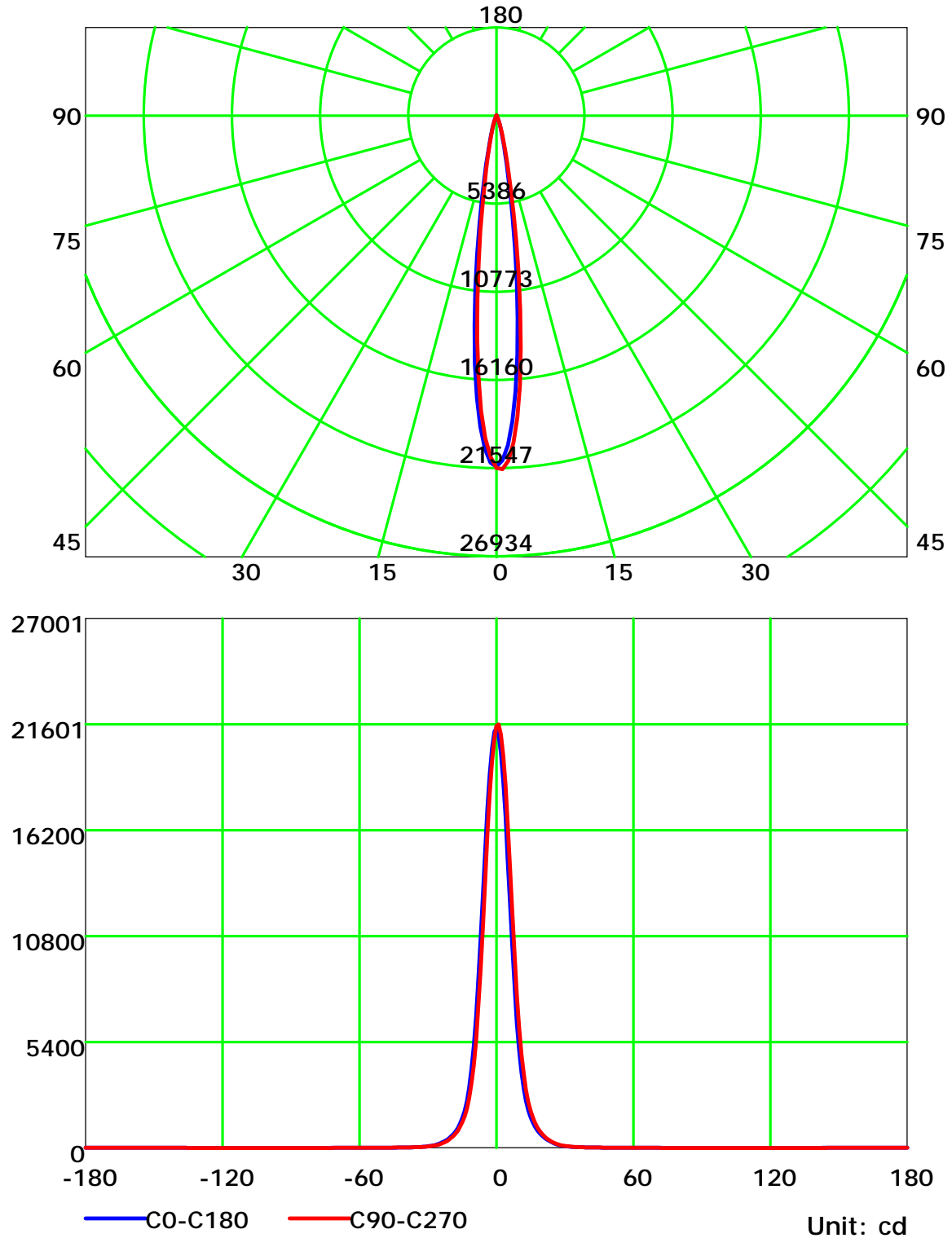
Test Device: GPM-1800B

Distance: 9.028 m

Humidity: 60%

Inspector:

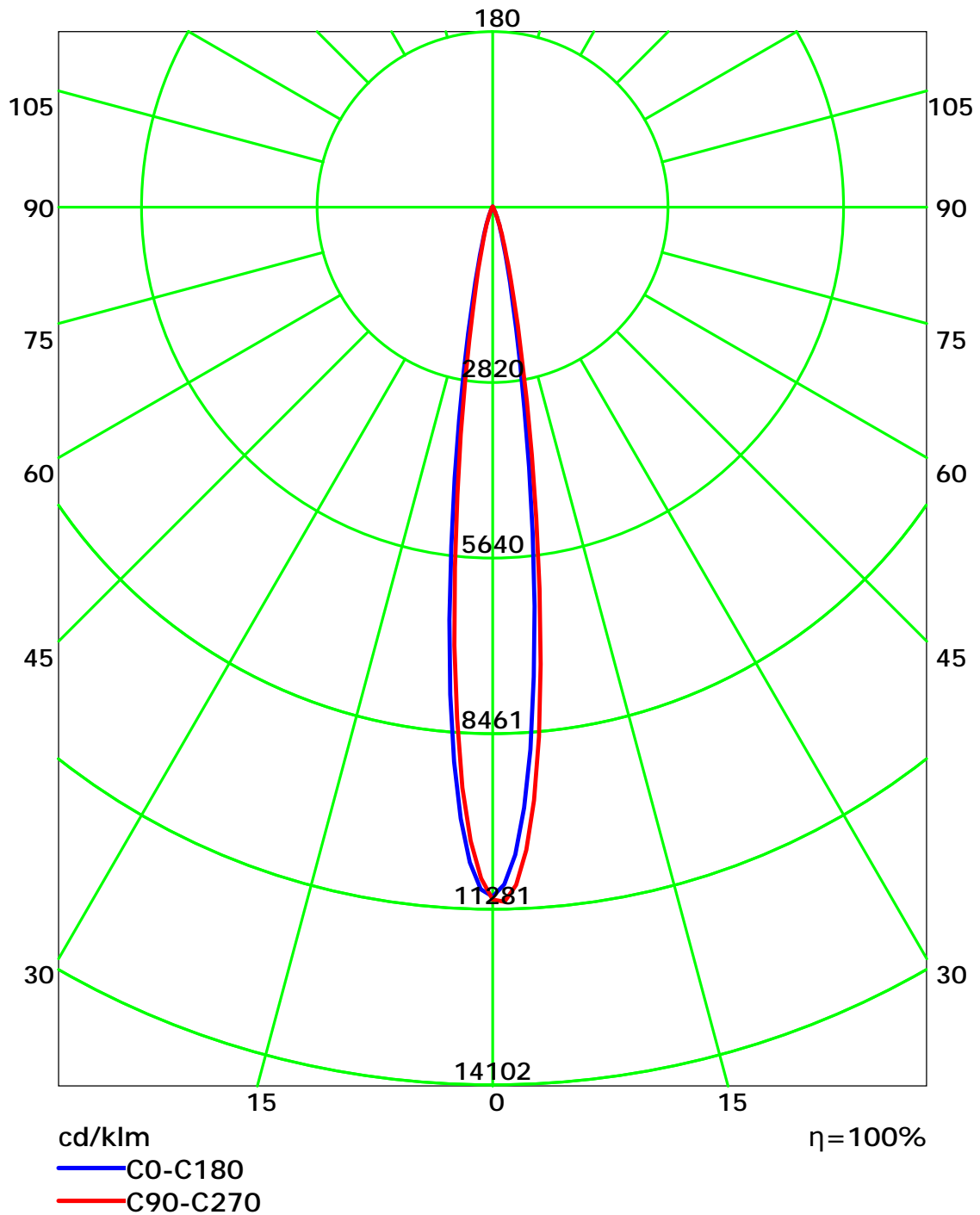
## Luminous Intensity Distribution Curve



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

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: Kerr

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

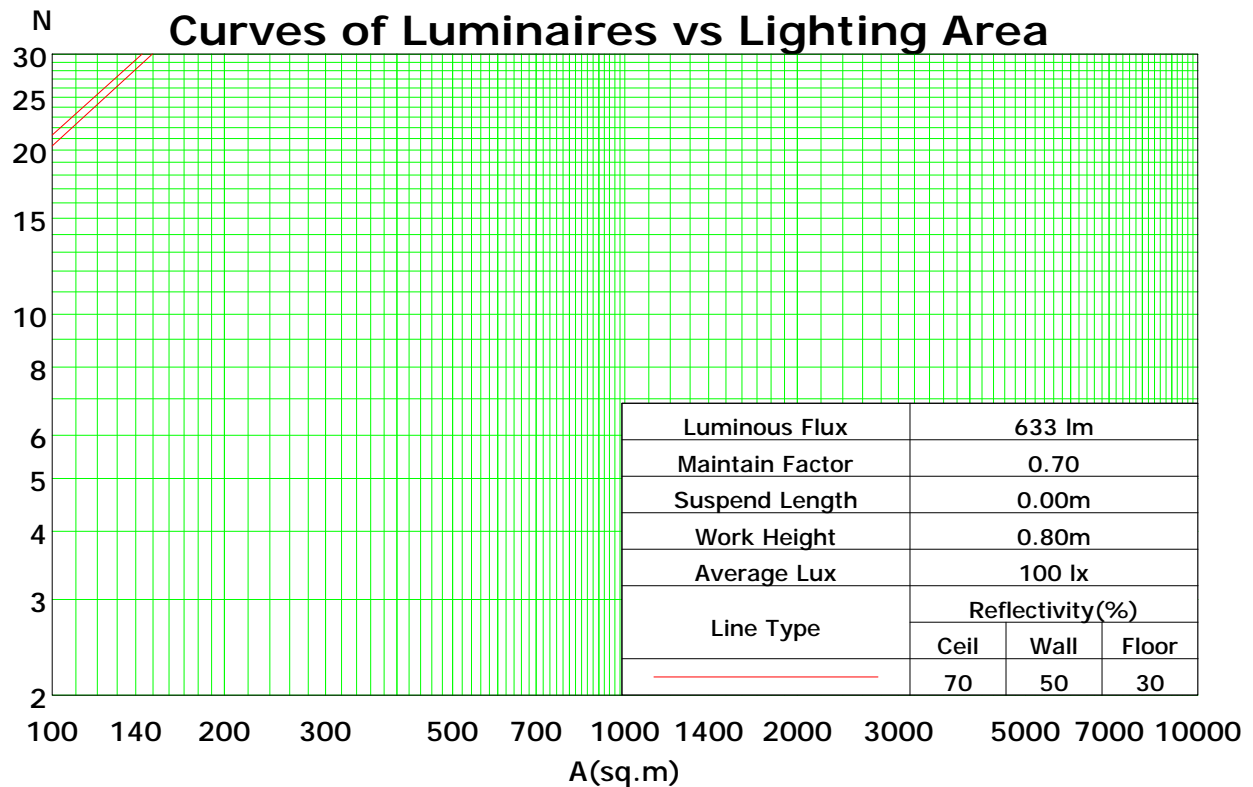
## Coefficients Of Utilization - Zonal Cavity Method

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	118	118	118	118	115	115	115	115	109	109	109	103	103	103	98	98	98	96
1	114	112	110	108	111	109	108	106	104	103	102	100	99	98	96	95	95	93
2	110	107	104	101	108	105	102	100	101	99	97	98	96	95	94	93	92	90
3	107	103	99	96	105	101	98	95	98	96	93	95	93	92	93	91	90	88
4	104	99	96	93	102	98	95	92	95	93	90	93	91	89	91	89	88	86
5	102	96	92	90	100	95	92	89	93	90	88	91	89	87	89	87	86	85
6	99	94	90	87	98	93	89	87	91	88	86	90	87	85	88	86	84	83
7	97	91	88	85	96	91	87	85	89	86	84	88	85	83	87	84	83	82
8	95	89	86	83	94	89	85	83	88	85	82	86	84	82	85	83	81	80
9	93	88	84	82	92	87	84	81	86	83	81	85	82	81	84	82	80	79
10	92	86	82	80	91	85	82	80	85	82	80	84	81	79	83	81	79	78

Spacing Criteria (0-180): 0.24

Spacing Criteria (90-270): 0.24

Spacing Criteria (Diagonal): 0.24



C Plane (°):0.0-360.0: 30.0

Test Lab:

Test Type: TYPE C

Temperature: 25

Operator: Kerr

Gamma Plane (°):0.0-180.0:1.0

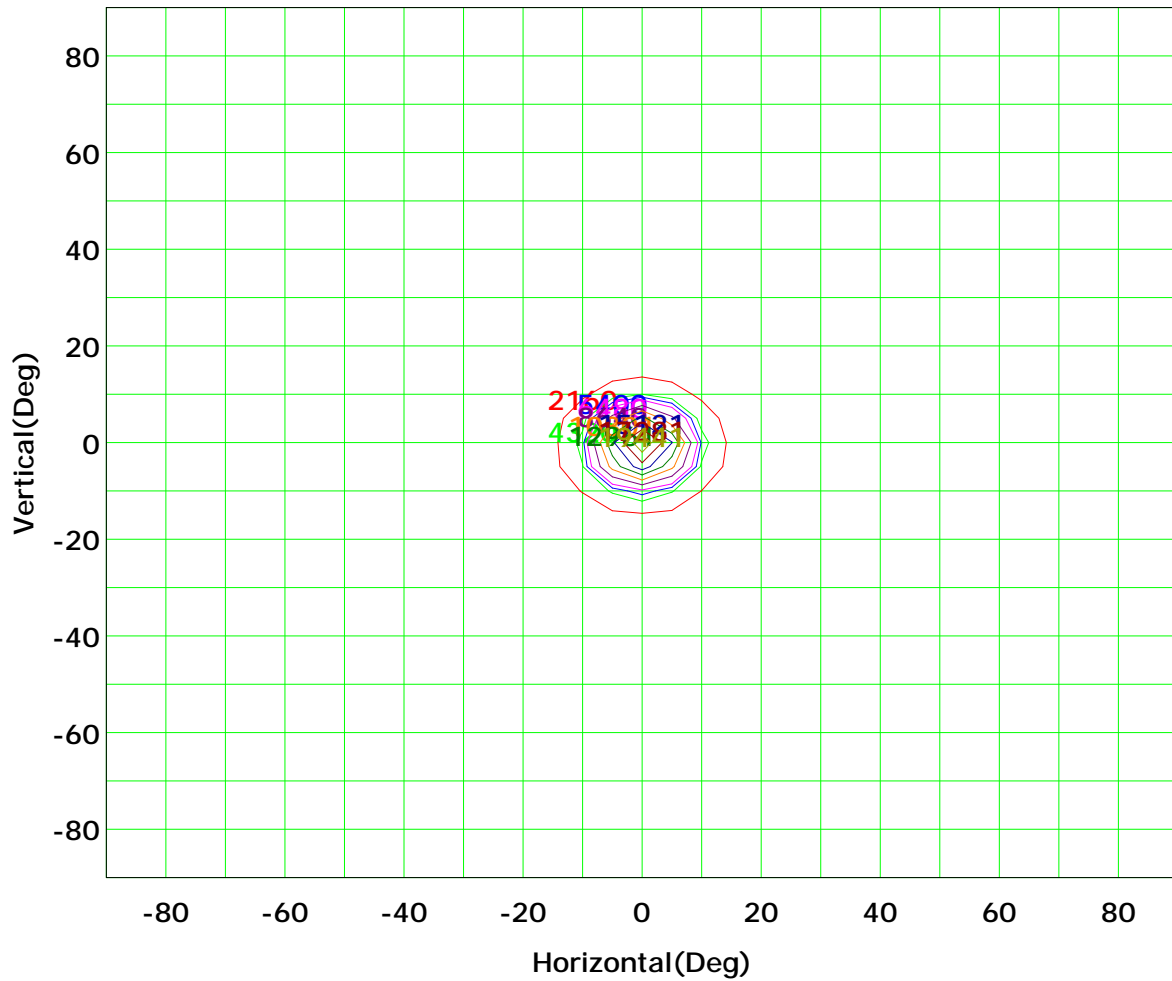
Test Device: GPM-1800B

Distance: 9.028 m

Humidity: 60%

Inspector:

## Isocandela (rectangle)



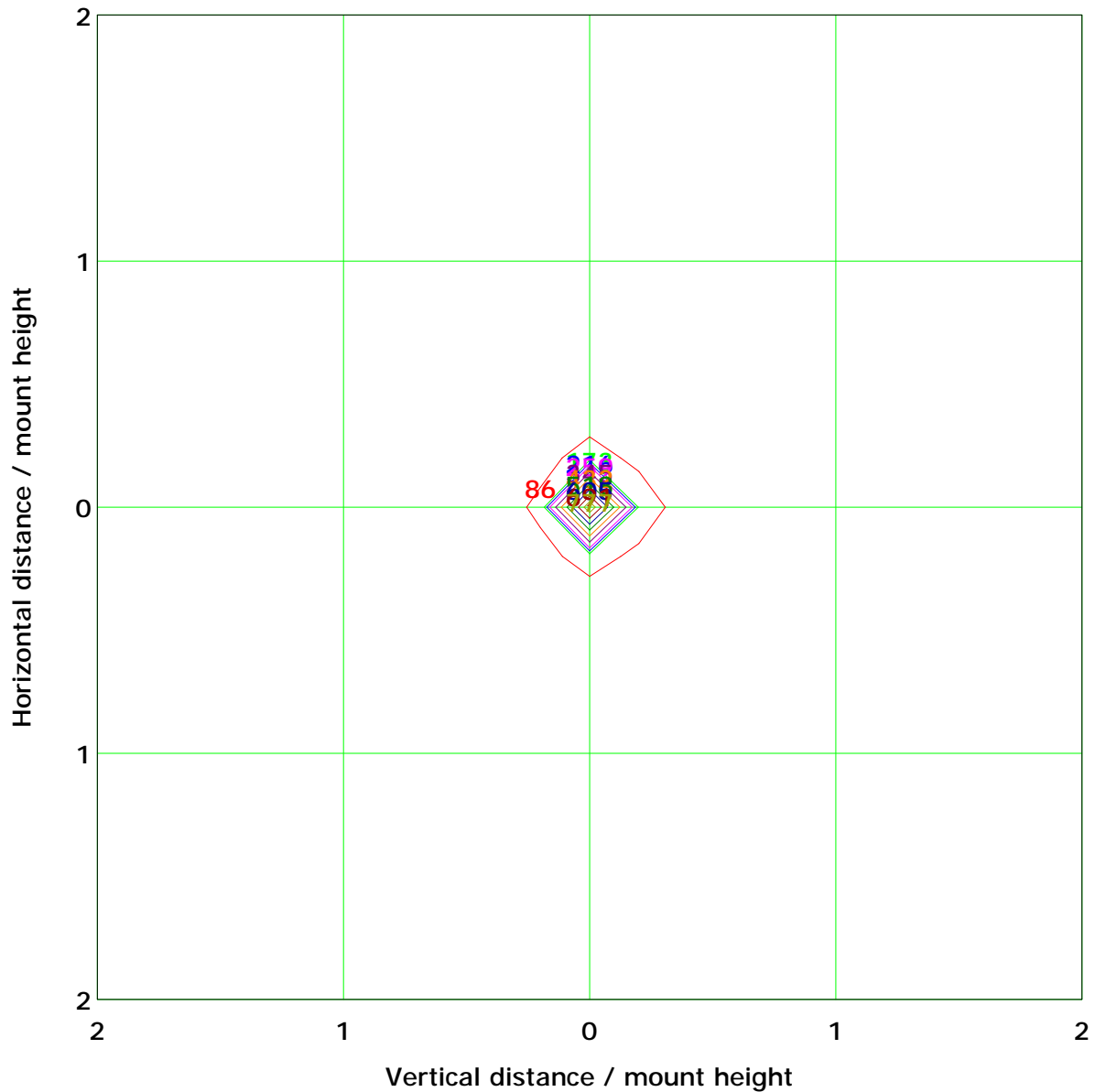
Imax (100%): 21601 cd

( 10%): 2160 cd	( 20%): 4320 cd
( 25%): 5400 cd	( 30%): 6480 cd
( 40%): 8640 cd	( 50%): 10801 cd
( 60%): 12961 cd	( 70%): 15121 cd
( 80%): 17281 cd	( 90%): 19441 cd

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

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%): 863.7 lx	
( 10%): 86.4 lx	( 20%): 172.7 lx
( 25%): 215.9 lx	( 30%): 259.1 lx
( 40%): 345.5 lx	( 50%): 431.8 lx
( 60%): 518.2 lx	( 70%): 604.6 lx
( 80%): 690.9 lx	( 90%): 777.3 lx

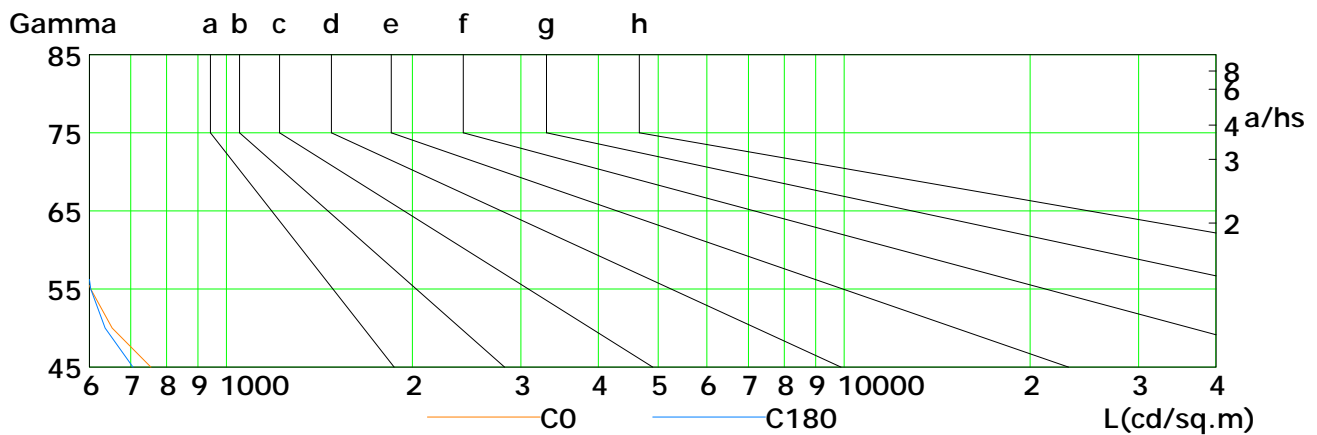
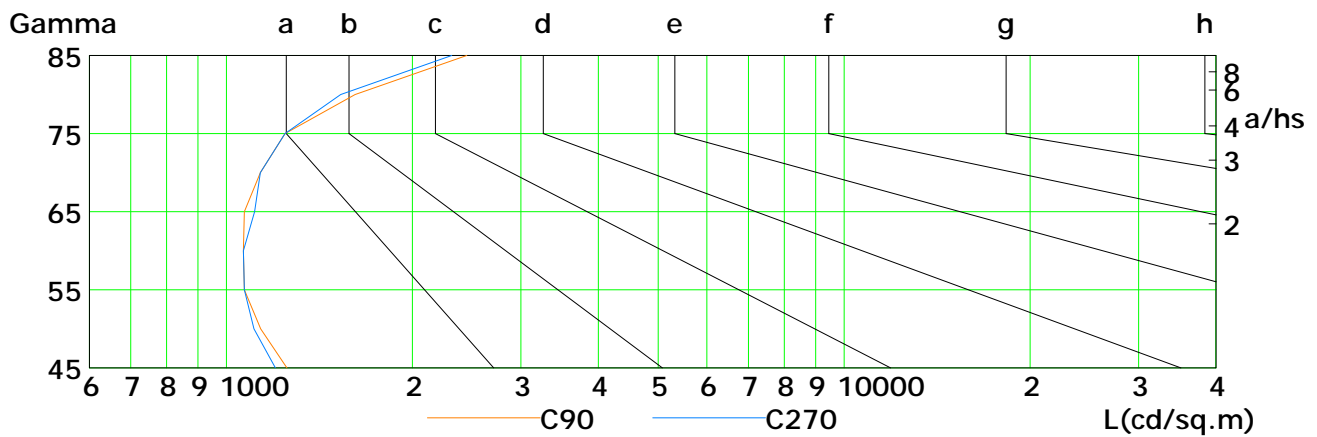
C Plane (°):0.0-360.0: 30.0  
 Test Lab:  
 Test Type: TYPE C  
 Temperature: 25  
 Operator: Kerr

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

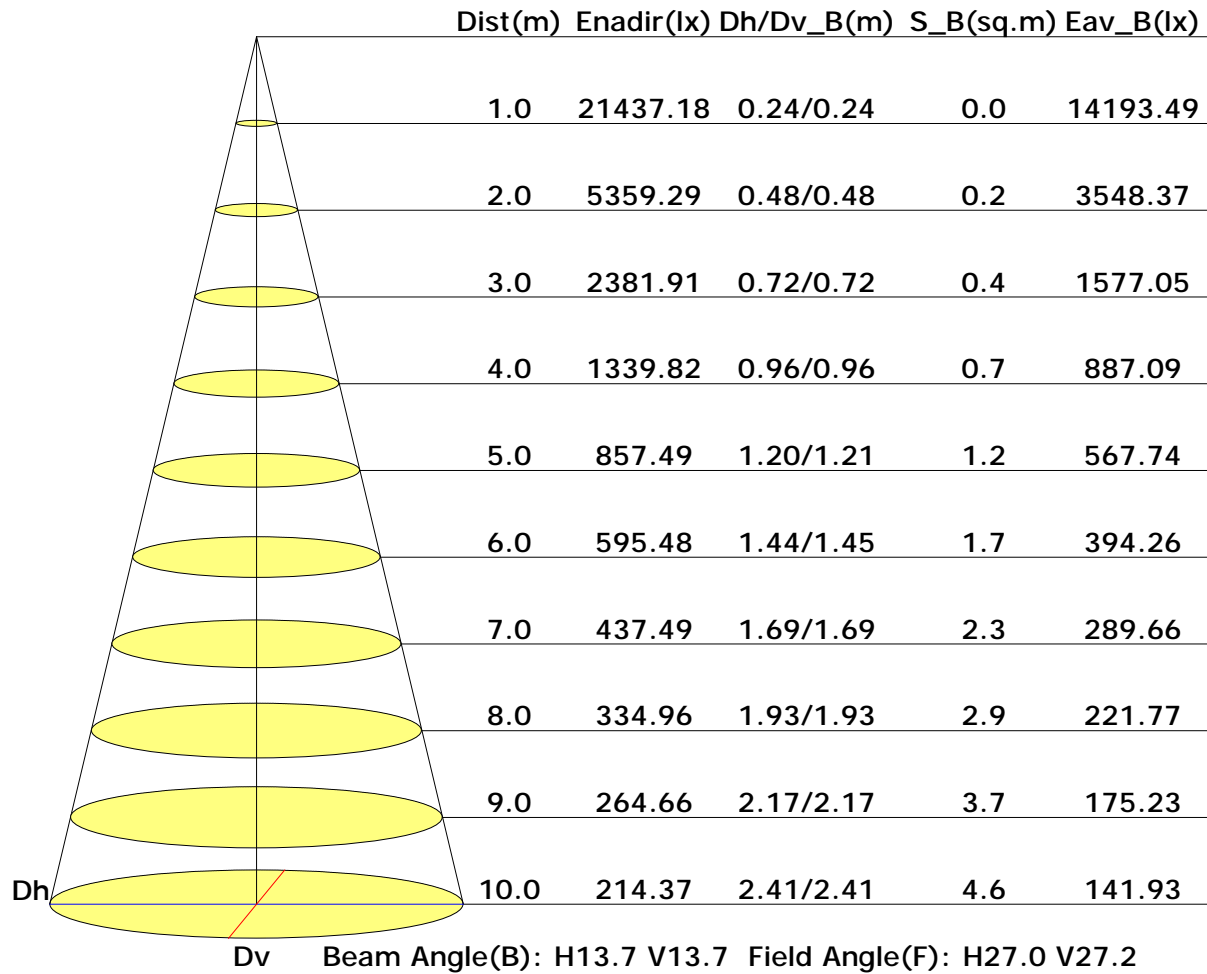


L(cd/sq.m)	G45	G50	G55	G60	G65	G70	G75	G80	G85
C0	755	653	603	573	544	477	426	416	434
C90	1253	1137	1070	1066	1070	1135	1245	1617	2450
C180	706	637	603	591	525	477	426	416	408
C270	1201	1109	1070	1066	1111	1135	1245	1532	2316

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

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

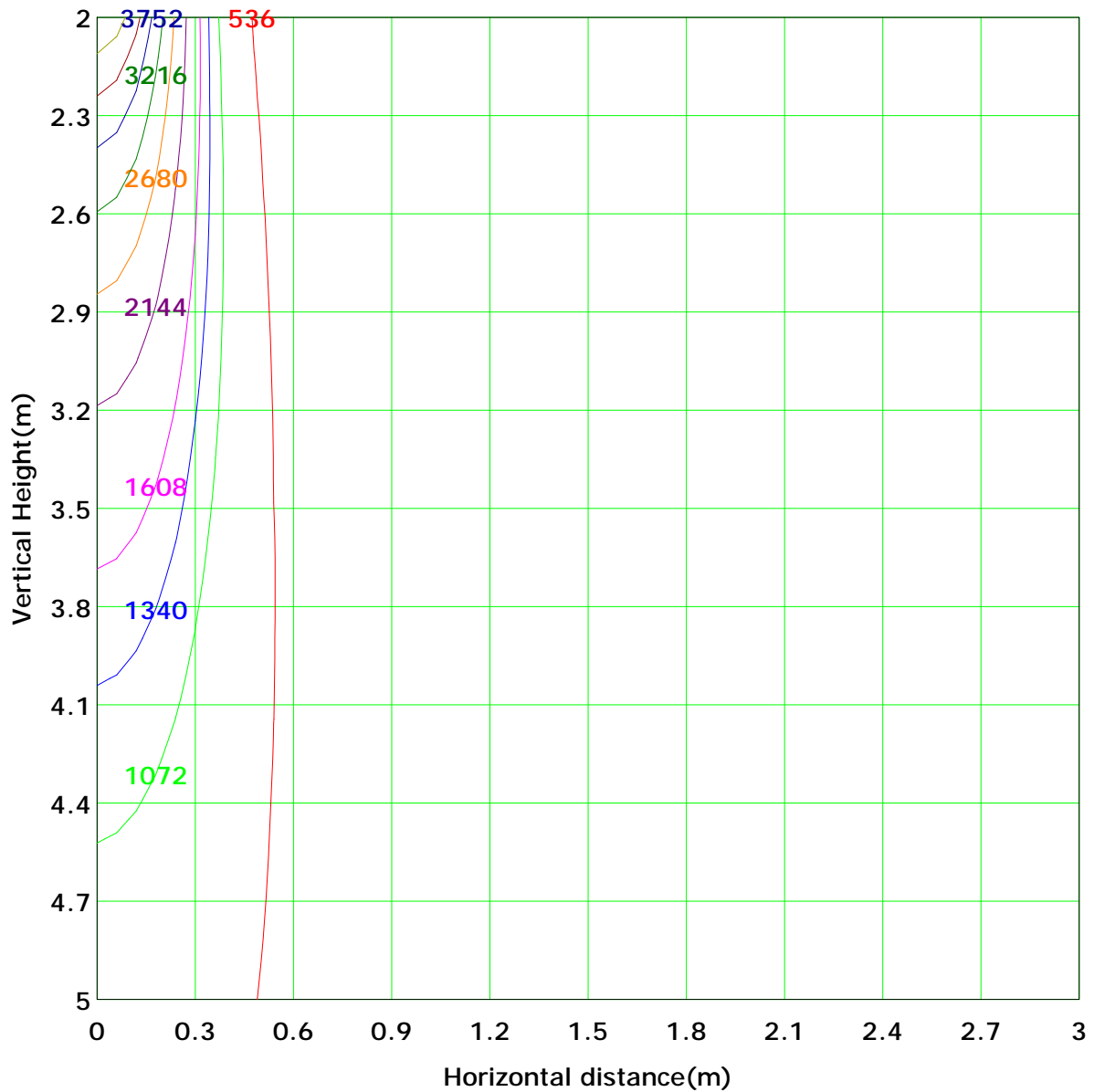
## Illuminance at a Distance



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

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: 5359.3 lx

( 10%): 535.9 lx	( 20%): 1071.9 lx
( 25%): 1339.8 lx	( 30%): 1607.8 lx
( 40%): 2143.7 lx	( 50%): 2679.6 lx
( 60%): 3215.6 lx	( 70%): 3751.5 lx
( 80%): 4287.4 lx	( 90%): 4823.4 lx

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

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

## Area Flux Table

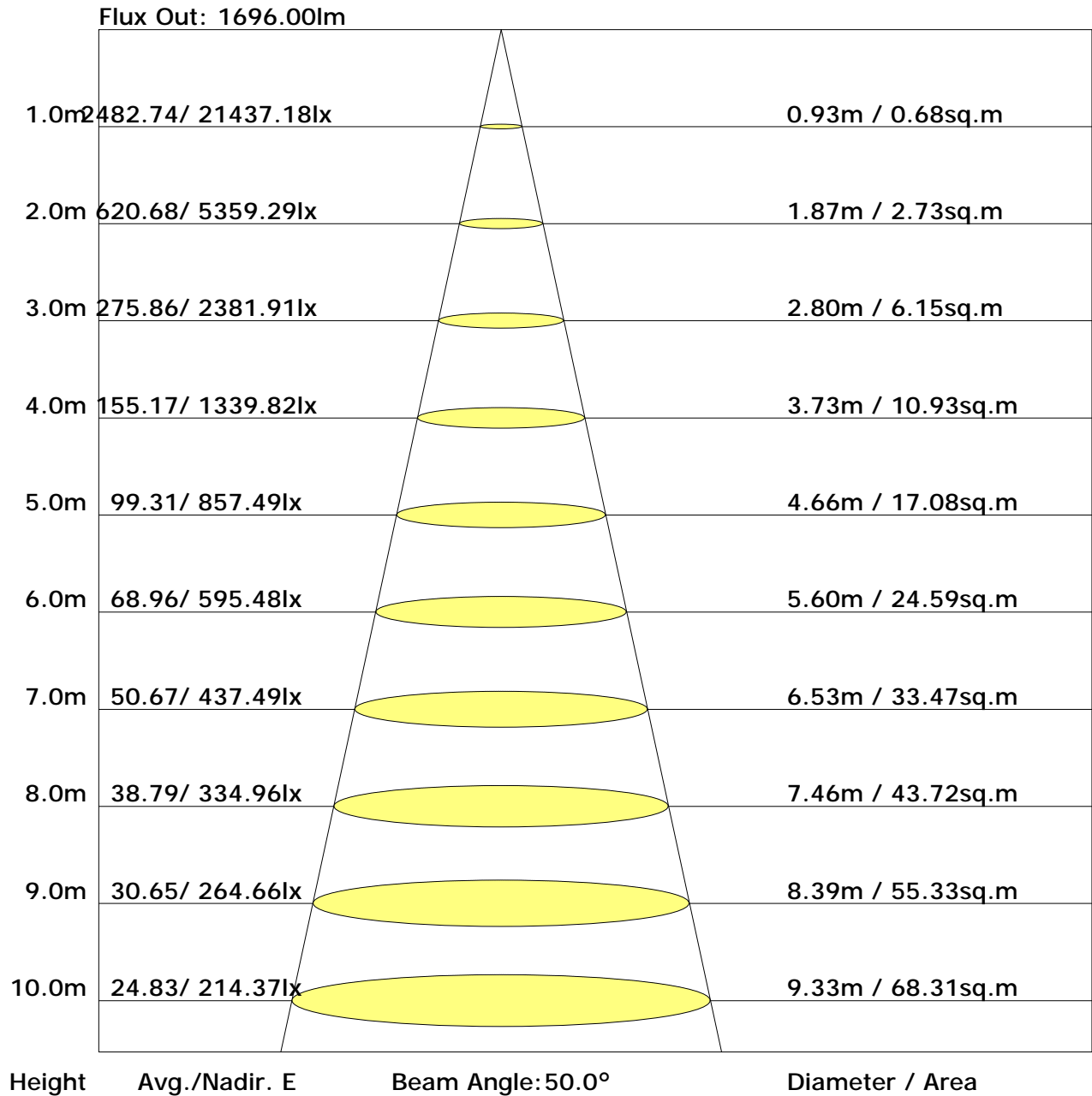
Unit: lm

Vertical plane	Horizontal plane																	Flux(T)	Flux(E)	Flux(T)	Flux(E)
	-90	-80	-70	-60	-50	-40	-30	-20	-10	0	10	20	30	40	50	60	70	80	90		
-90	0.0	0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.5	0.0	0.0
-80	0.0	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.0	0.0
-70	0.0	0.1	0.1	0.2	0.3	0.3	0.3	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.0	0.0
-60	0.0	0.1	0.1	0.2	0.3	0.3	0.4	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.0	0.0
-50	0.0	0.1	0.1	0.2	0.3	0.3	0.4	0.5	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.5	0.0	0.0
-40	0.0	0.1	0.1	0.2	0.3	0.4	0.5	0.6	0.8	1.0	1.2	1.5	1.6	1.6	1.6	1.6	1.6	1.6	0.5	0.0	0.0
-30	0.0	0.1	0.2	0.3	0.4	0.6	0.8	1.0	1.3	1.7	2.1	2.5	2.8	2.8	2.8	2.8	2.8	2.8	0.5	0.0	0.0
-20	0.0	0.1	0.2	0.3	0.5	0.7	1.0	1.5	2.0	2.5	3.0	3.5	3.8	3.8	3.8	3.8	3.8	3.8	0.5	0.0	0.0
-10	0.0	0.1	0.2	0.4	0.6	1.0	1.3	1.9	2.7	3.5	4.2	5.0	5.5	5.5	5.5	5.5	5.5	5.5	0.5	0.0	0.0
0	0.0	0.1	0.2	0.4	0.6	1.3	1.7	2.3	3.0	3.8	4.5	5.2	5.5	5.5	5.5	5.5	5.5	5.5	0.5	0.0	0.0
10	0.0	0.1	0.2	0.3	0.5	0.8	1.0	1.3	1.7	2.1	2.5	2.8	2.8	2.8	2.8	2.8	2.8	2.8	0.5	0.0	0.0
20	0.0	0.1	0.2	0.3	0.5	0.8	1.0	1.3	1.7	2.1	2.5	2.8	2.8	2.8	2.8	2.8	2.8	2.8	0.5	0.0	0.0
30	0.0	0.1	0.2	0.3	0.4	0.6	0.9	1.3	1.7	2.1	2.5	2.8	2.8	2.8	2.8	2.8	2.8	2.8	0.5	0.0	0.0
40	0.0	0.1	0.2	0.3	0.4	0.6	0.9	1.3	1.7	2.1	2.5	2.8	2.8	2.8	2.8	2.8	2.8	2.8	0.5	0.0	0.0
50	0.0	0.1	0.2	0.3	0.3	0.5	0.6	0.9	1.3	1.7	2.1	2.5	2.8	2.8	2.8	2.8	2.8	2.8	0.5	0.0	0.0
60	0.0	0.1	0.1	0.2	0.3	0.4	0.5	0.6	0.9	1.3	1.7	2.1	2.5	2.8	2.8	2.8	2.8	2.8	0.5	0.0	0.0
70	0.0	0.1	0.1	0.2	0.3	0.3	0.4	0.5	0.6	0.9	1.3	1.7	2.1	2.5	2.8	2.8	2.8	2.8	0.5	0.0	0.0
80	0.0	0.1	0.1	0.2	0.2	0.3	0.3	0.4	0.5	0.6	0.9	1.3	1.7	2.1	2.5	2.8	2.8	2.8	0.5	0.0	0.0
90	0.0	0.1	0.1	0.2	0.2	0.3	0.3	0.4	0.5	0.6	0.9	1.3	1.7	2.1	2.5	2.8	2.8	2.8	0.5	0.0	0.0
Flux(T)	0.5	1.5	3.0	4.6	6.6	10.6	31.7	145.5	710.9	719.4	153.2	34.7	11.5	7.0	4.8	3.0	1.6	0.5	1851		
Flux(E)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	38.4	633.0	639.5	44.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1355		

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

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: Kerr

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	-0.3	0.6	0.1	1.0	1.4	-1.8	-0.9	-1.4	-0.6	-0.1
3H	2.0	2.8	2.5	3.2	3.7	0.1	0.9	0.6	1.3	1.8
4H	3.2	3.9	3.7	4.3	4.8	1.0	1.7	1.4	2.1	2.6
6H	4.4	5.0	4.8	5.5	6.0	1.9	2.5	2.3	3.0	3.5
8H	5.0	5.6	5.5	6.1	6.6	2.3	2.9	2.8	3.4	3.9
12H	5.7	6.3	6.2	6.8	7.3	2.7	3.3	3.2	3.8	4.3
X=4H Y=2H	0.0	0.8	0.5	1.2	1.7	-1.2	-0.5	-0.7	-0.1	0.4
3H	2.5	3.1	3.0	3.6	4.1	0.9	1.5	1.4	2.0	2.5
4H	3.8	4.4	4.3	4.9	5.4	2.0	2.5	2.5	3.0	3.5
6H	5.2	5.6	5.7	6.2	6.7	3.0	3.5	3.6	4.0	4.6
8H	5.9	6.3	6.4	6.8	7.4	3.5	3.9	4.0	4.5	5.0
12H	6.7	7.1	7.3	7.7	8.2	4.0	4.4	4.6	5.0	5.5
X=8H Y=4H	4.0	4.5	4.6	5.0	5.5	2.4	2.8	2.9	3.4	3.9
6H	5.5	5.9	6.1	6.5	7.0	3.7	4.0	4.2	4.6	5.2
8H	6.4	6.7	7.0	7.3	7.9	4.3	4.6	4.9	5.2	5.8
12H	7.4	7.7	8.0	8.3	8.9	5.0	5.3	5.6	5.8	6.5
X=12H Y=4H	4.0	4.4	4.6	5.0	5.5	2.5	2.9	3.1	3.4	4.0
6H	5.6	5.9	6.2	6.5	7.1	3.9	4.2	4.5	4.7	5.3
8H	6.5	6.8	7.1	7.4	8.0	4.6	4.8	5.2	5.4	6.1

Calculate in accordance with CIE 190:2010

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

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 = 0.50								
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	1.08	1.12	1.15	1.17	1.19	1.21	1.23	1.24	1.26
	0.30		1.05	1.08	1.11	1.13	1.16	1.19	1.20	1.22	1.24
	0.20		1.02	1.06	1.08	1.11	1.14	1.16	1.18	1.21	1.22
0.50	0.50	0.20	1.07	1.10	1.12	1.13	1.16	1.17	1.18	1.19	1.20
	0.30		1.04	1.07	1.09	1.11	1.13	1.15	1.16	1.18	1.19
	0.20		1.01	1.05	1.07	1.09	1.11	1.13	1.15	1.17	1.18
0.30	0.50	0.20	1.05	1.08	1.09	1.11	1.12	1.13	1.14	1.15	1.15
	0.30		1.03	1.05	1.07	1.08	1.10	1.12	1.12	1.14	1.14
	0.20		1.01	1.03	1.05	1.07	1.09	1.10	1.11	1.13	1.14
0.00	0.00	0.00	0.99	1.01	1.02	1.03	1.05	1.06	1.06	1.07	1.07
<p>Rating: 18W Photometrically tested without ceiling board.</p> <p>Multiply UF values by service correction factors</p> <p>Calculate in accordance with CIBSE Technical Memorandum NO.5 1980</p>											

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

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 = 0.50								
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	0.45	0.38	0.32	0.29	0.23	0.19	0.17	0.13	0.11
	0.30		0.37	0.32	0.28	0.25	0.21	0.18	0.16	0.12	0.10
	0.20		0.32	0.28	0.25	0.23	0.19	0.16	0.14	0.12	0.10
0.50	0.50	0.20	0.41	0.34	0.29	0.26	0.21	0.22	0.15	0.12	0.09
	0.30		0.35	0.30	0.26	0.23	0.19	0.16	0.14	0.11	0.09
	0.20		0.30	0.26	0.23	0.21	0.17	0.15	0.13	0.10	0.09
0.30	0.50	0.20	0.38	0.31	0.26	0.23	0.18	0.15	0.13	0.10	0.08
	0.30		0.33	0.27	0.24	0.21	0.17	0.14	0.12	0.10	0.08
	0.20		0.28	0.24	0.21	0.19	0.16	0.13	0.12	0.09	0.08
0.00	0.00	0.00	0.11	0.09	0.08	0.07	0.05	0.04	0.04	0.03	0.02
<p>Rating: 18W Photometrically tested without ceiling board.</p> <p>Multiply UF values by service correction factors</p> <p>Calculate in accordance with CIBSE Technical Memorandum NO.5 1980</p>											

C Plane (°):0.0-360.0: 30.0  
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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 = 0.50								
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	0.21	0.22	0.24	0.25	0.25	0.27	0.27
	0.30		0.14	0.16	0.18	0.19	0.21	0.23	0.24	0.25	0.26
	0.20		0.12	0.14	0.16	0.17	0.19	0.21	0.22	0.24	0.25
0.50	0.50	0.20	0.16	0.18	0.20	0.21	0.23	0.24	0.24	0.25	0.26
	0.30		0.13	0.16	0.17	0.19	0.21	0.22	0.23	0.24	0.25
	0.20		0.11	0.14	0.15	0.17	0.19	0.20	0.22	0.23	0.24
0.30	0.50	0.20	0.16	0.18	0.19	0.20	0.22	0.23	0.23	0.24	0.25
	0.30		0.13	0.15	0.17	0.18	0.20	0.21	0.22	0.23	0.24
	0.20		0.11	0.13	0.15	0.17	0.18	0.20	0.21	0.22	0.23
0.00	0.00	0.00	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
<p>Rating: 18W Photometrically tested without ceiling board.</p> <p>Multiply UF values by service correction factors</p> <p>Calculate in accordance with CIBSE Technical Memorandum NO.5 1980</p>											

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

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

## Zonal Lumen

Gamma [°]	I <sub>mean</sub> [cd]	Zonal Flux [lm]	Sum Zonal Flux [lm]	Rel Zonal Flux [%]	Sum Rel Zonal Flux [%]
0.0-1.0	21351.1	20.4	20.4	1.06	1.06
1.0-2.0	20779.8	59.7	80.1	3.08	4.14
2.0-3.0	19664.5	94.1	174.1	4.86	9.00
3.0-4.0	18071.0	121.0	295.1	6.25	15.25
4.0-5.0	16096.2	138.5	433.6	7.16	22.40
5.0-6.0	13884.7	145.9	579.5	7.54	29.95
6.0-7.0	11615.2	144.2	723.7	7.45	37.40
7.0-8.0	9445.1	135.2	858.9	6.99	44.38
8.0-9.0	7491.8	121.4	980.4	6.27	50.66
9.0-10.0	5856.3	106.0	1086.4	5.48	56.13
10.0-11.0	4558.5	91.1	1177.5	4.71	60.84
11.0-12.0	3554.9	77.7	1255.2	4.02	64.86
12.0-13.0	2799.4	66.4	1321.6	3.43	68.29
13.0-14.0	2233.6	57.2	1378.8	2.95	71.24
14.0-15.0	1807.7	49.6	1428.4	2.56	73.81
15.0-16.0	1486.0	43.5	1472.0	2.25	76.06
16.0-17.0	1236.2	38.5	1510.5	1.99	78.05
17.0-18.0	1035.0	34.1	1544.6	1.76	79.81
18.0-19.0	871.4	30.3	1574.9	1.57	81.38
19.0-20.0	738.6	27.0	1602.0	1.40	82.77
20.0-21.0	625.2	24.0	1626.0	1.24	84.01
21.0-22.0	527.3	21.2	1647.2	1.10	85.11
22.0-23.0	443.6	18.6	1665.8	0.96	86.07
23.0-24.0	370.7	16.2	1682.0	0.84	86.91
24.0-25.0	307.9	14.0	1696.0	0.72	87.63
25.0-26.0	254.9	12.0	1708.0	0.62	88.25
26.0-27.0	210.2	10.3	1718.3	0.53	88.79
27.0-28.0	173.1	8.8	1727.1	0.45	89.24
28.0-29.0	143.2	7.5	1734.6	0.39	89.63
29.0-30.0	119.1	6.4	1741.0	0.33	89.96
30.0-31.0	99.7	5.6	1746.6	0.29	90.25
31.0-32.0	84.5	4.8	1751.4	0.25	90.50
32.0-33.0	72.6	4.3	1755.7	0.22	90.72
33.0-34.0	63.1	3.8	1759.5	0.20	90.91
34.0-35.0	55.7	3.5	1763.0	0.18	91.09
35.0-36.0	49.9	3.2	1766.1	0.16	91.26

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

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

## Zonal Lumen (Continue 1)

Gamma [°]	I <sub>mean</sub> [cd]	Zonal Flux [lm]	Sum Zonal Flux [lm]	Rel Zonal Flux [%]	Sum Rel Zonal Flux [%]
36.0-37.0	45.3	3.0	1769.1	0.15	91.41
37.0-38.0	41.6	2.8	1771.9	0.14	91.55
38.0-39.0	38.4	2.6	1774.5	0.14	91.69
39.0-40.0	35.8	2.5	1777.0	0.13	91.82
40.0-41.0	33.6	2.4	1779.4	0.12	91.94
41.0-42.0	31.7	2.3	1781.7	0.12	92.06
42.0-43.0	30.1	2.2	1783.9	0.12	92.18
43.0-44.0	28.6	2.2	1786.1	0.11	92.29
44.0-45.0	27.3	2.1	1788.2	0.11	92.40
45.0-46.0	26.2	2.0	1790.2	0.11	92.50
46.0-47.0	25.2	2.0	1792.2	0.10	92.60
47.0-48.0	24.3	2.0	1794.2	0.10	92.71
48.0-49.0	23.4	1.9	1796.1	0.10	92.81
49.0-50.0	22.6	1.9	1798.0	0.10	92.90
50.0-51.0	22.0	1.9	1799.9	0.10	93.00
51.0-52.0	21.4	1.8	1801.7	0.09	93.09
52.0-53.0	20.9	1.8	1803.5	0.09	93.19
53.0-54.0	20.3	1.8	1805.3	0.09	93.28
54.0-55.0	19.7	1.8	1807.1	0.09	93.37
55.0-56.0	19.2	1.7	1808.8	0.09	93.46
56.0-57.0	18.9	1.7	1810.5	0.09	93.55
57.0-58.0	18.5	1.7	1812.2	0.09	93.64
58.0-59.0	18.0	1.7	1813.9	0.09	93.73
59.0-60.0	17.5	1.7	1815.6	0.09	93.81
60.0-61.0	17.1	1.6	1817.2	0.08	93.90
61.0-62.0	16.7	1.6	1818.8	0.08	93.98
62.0-63.0	16.3	1.6	1820.4	0.08	94.06
63.0-64.0	15.8	1.6	1822.0	0.08	94.14
64.0-65.0	15.5	1.5	1823.5	0.08	94.22
65.0-66.0	15.2	1.5	1825.0	0.08	94.30
66.0-67.0	14.8	1.5	1826.5	0.08	94.38
67.0-68.0	14.4	1.5	1828.0	0.08	94.45
68.0-69.0	14.1	1.4	1829.4	0.07	94.53
69.0-70.0	13.7	1.4	1830.8	0.07	94.60
70.0-71.0	13.3	1.4	1832.2	0.07	94.67
71.0-72.0	13.0	1.4	1833.5	0.07	94.74

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

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

## Zonal Lumen (Continue 2)

Gamma [°]	I <sub>mean</sub> [cd]	Zonal Flux [lm]	Sum Zonal Flux [lm]	Rel Zonal Flux [%]	Sum Rel Zonal Flux [%]
72.0-73.0	12.7	1.3	1834.9	0.07	94.81
73.0-74.0	12.4	1.3	1836.2	0.07	94.87
74.0-75.0	12.0	1.3	1837.4	0.07	94.94
75.0-76.0	11.7	1.2	1838.7	0.06	95.00
76.0-77.0	11.4	1.2	1839.9	0.06	95.07
77.0-78.0	11.2	1.2	1841.1	0.06	95.13
78.0-79.0	11.1	1.2	1842.3	0.06	95.19
79.0-80.0	10.8	1.2	1843.5	0.06	95.25
80.0-81.0	10.5	1.1	1844.6	0.06	95.31
81.0-82.0	10.3	1.1	1845.7	0.06	95.37
82.0-83.0	10.3	1.1	1846.8	0.06	95.43
83.0-84.0	10.2	1.1	1847.9	0.06	95.48
84.0-85.0	10.0	1.1	1849.0	0.06	95.54
85.0-86.0	9.9	1.1	1850.1	0.06	95.60
86.0-87.0	9.9	1.1	1851.2	0.06	95.65
87.0-88.0	9.9	1.1	1852.3	0.06	95.71
88.0-89.0	9.9	1.1	1853.4	0.06	95.76
89.0-90.0	9.9	1.1	1854.5	0.06	95.82
90.0-91.0	9.8	1.1	1855.5	0.06	95.88
91.0-92.0	9.8	1.1	1856.6	0.06	95.93
92.0-93.0	9.9	1.1	1857.7	0.06	95.99
93.0-94.0	9.9	1.1	1858.8	0.06	96.04
94.0-95.0	10.0	1.1	1859.9	0.06	96.10
95.0-96.0	9.9	1.1	1860.9	0.06	96.16
96.0-97.0	9.9	1.1	1862.0	0.06	96.21
97.0-98.0	10.0	1.1	1863.1	0.06	96.27
98.0-99.0	10.0	1.1	1864.2	0.06	96.32
99.0-100.0	9.9	1.1	1865.3	0.06	96.38
100.0-101.0	9.9	1.1	1866.3	0.06	96.43
101.0-102.0	9.9	1.1	1867.4	0.06	96.49
102.0-103.0	10.0	1.1	1868.5	0.06	96.54
103.0-104.0	10.0	1.1	1869.5	0.05	96.60
104.0-105.0	9.9	1.1	1870.6	0.05	96.65
105.0-106.0	10.0	1.1	1871.6	0.05	96.71
106.0-107.0	10.0	1.0	1872.7	0.05	96.76
107.0-108.0	10.0	1.0	1873.7	0.05	96.82

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

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

### Zonal Lumen (Continue 3)

Gamma [°]	I <sub>mean</sub> [cd]	Zonal Flux [lm]	Sum Zonal Flux [lm]	Rel Zonal Flux [%]	Sum Rel Zonal Flux [%]
108.0-109.0	10.0	1.0	1874.8	0.05	96.87
109.0-110.0	10.0	1.0	1875.8	0.05	96.92
110.0-111.0	10.0	1.0	1876.8	0.05	96.98
111.0-112.0	10.0	1.0	1877.8	0.05	97.03
112.0-113.0	10.0	1.0	1878.8	0.05	97.08
113.0-114.0	10.0	1.0	1879.9	0.05	97.13
114.0-115.0	10.0	1.0	1880.9	0.05	97.18
115.0-116.0	10.1	1.0	1881.8	0.05	97.24
116.0-117.0	10.1	1.0	1882.8	0.05	97.29
117.0-118.0	10.1	1.0	1883.8	0.05	97.34
118.0-119.0	10.1	1.0	1884.8	0.05	97.39
119.0-120.0	10.1	1.0	1885.8	0.05	97.44
120.0-121.0	10.1	1.0	1886.7	0.05	97.49
121.0-122.0	10.1	0.9	1887.7	0.05	97.54
122.0-123.0	10.1	0.9	1888.6	0.05	97.58
123.0-124.0	10.2	0.9	1889.5	0.05	97.63
124.0-125.0	10.2	0.9	1890.5	0.05	97.68
125.0-126.0	10.4	0.9	1891.4	0.05	97.73
126.0-127.0	10.5	0.9	1892.3	0.05	97.78
127.0-128.0	10.6	0.9	1893.2	0.05	97.82
128.0-129.0	10.7	0.9	1894.1	0.05	97.87
129.0-130.0	10.8	0.9	1895.0	0.05	97.92
130.0-131.0	11.0	0.9	1896.0	0.05	97.96
131.0-132.0	11.2	0.9	1896.9	0.05	98.01
132.0-133.0	11.4	0.9	1897.8	0.05	98.06
133.0-134.0	11.7	0.9	1898.7	0.05	98.11
134.0-135.0	12.0	0.9	1899.7	0.05	98.16
135.0-136.0	12.4	0.9	1900.6	0.05	98.21
136.0-137.0	12.8	1.0	1901.6	0.05	98.26
137.0-138.0	13.2	1.0	1902.6	0.05	98.31
138.0-139.0	13.6	1.0	1903.5	0.05	98.36
139.0-140.0	14.1	1.0	1904.6	0.05	98.41
140.0-141.0	14.7	1.0	1905.6	0.05	98.46
141.0-142.0	15.2	1.0	1906.6	0.05	98.52
142.0-143.0	15.8	1.1	1907.7	0.05	98.57
143.0-144.0	16.4	1.1	1908.7	0.06	98.63

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

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

### Zonal Lumen (Continue 4)

Gamma [°]	I <sub>mean</sub> [cd]	Zonal Flux [lm]	Sum Zonal Flux [lm]	Rel Zonal Flux [%]	Sum Rel Zonal Flux [%]
144.0-145.0	17.1	1.1	1909.8	0.06	98.68
145.0-146.0	17.8	1.1	1910.9	0.06	98.74
146.0-147.0	18.5	1.1	1912.1	0.06	98.80
147.0-148.0	19.1	1.1	1913.2	0.06	98.85
148.0-149.0	19.8	1.1	1914.3	0.06	98.91
149.0-150.0	20.4	1.1	1915.5	0.06	98.97
150.0-151.0	21.0	1.1	1916.6	0.06	99.03
151.0-152.0	21.5	1.1	1917.7	0.06	99.09
152.0-153.0	22.0	1.1	1918.8	0.06	99.15
153.0-154.0	22.5	1.1	1919.9	0.06	99.20
154.0-155.0	23.0	1.1	1921.0	0.06	99.26
155.0-156.0	23.3	1.1	1922.1	0.05	99.31
156.0-157.0	23.7	1.0	1923.1	0.05	99.37
157.0-158.0	24.0	1.0	1924.1	0.05	99.42
158.0-159.0	24.3	1.0	1925.1	0.05	99.47
159.0-160.0	24.5	0.9	1926.0	0.05	99.52
160.0-161.0	24.7	0.9	1926.9	0.05	99.56
161.0-162.0	24.9	0.9	1927.8	0.04	99.61
162.0-163.0	24.9	0.8	1928.6	0.04	99.65
163.0-164.0	24.9	0.8	1929.4	0.04	99.69
164.0-165.0	25.0	0.7	1930.1	0.04	99.73
165.0-166.0	25.0	0.7	1930.8	0.04	99.77
166.0-167.0	25.0	0.6	1931.4	0.03	99.80
167.0-168.0	24.9	0.6	1932.0	0.03	99.83
168.0-169.0	24.9	0.5	1932.6	0.03	99.86
169.0-170.0	24.7	0.5	1933.1	0.03	99.88
170.0-171.0	24.5	0.4	1933.5	0.02	99.91
171.0-172.0	24.3	0.4	1933.9	0.02	99.93
172.0-173.0	24.0	0.3	1934.3	0.02	99.94
173.0-174.0	23.7	0.3	1934.6	0.02	99.96
174.0-175.0	23.4	0.2	1934.8	0.01	99.97
175.0-176.0	23.2	0.2	1935.0	0.01	99.98
176.0-177.0	23.0	0.2	1935.2	0.01	99.99
177.0-178.0	22.8	0.1	1935.3	0.01	100.00
178.0-179.0	22.8	0.1	1935.3	0.00	100.00
179.0-180.0	22.8	0.0	1935.4	0.00	100.00

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

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