



Report No.:

Test Time: 06/09/2018 12:57

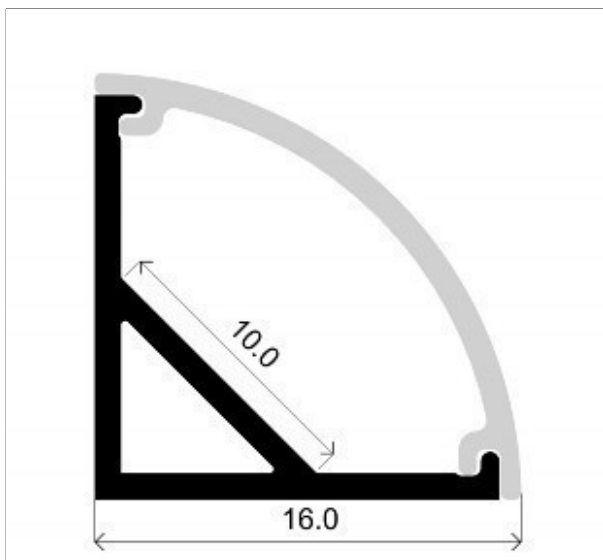
Luminaire Property

Luminaire Manufacturer: Lighting Line
 Luminaire Description: LLP-AN02-08 + LLD-08-UK
 Lamp Description: Strip 14,4W/m 60led/m Number of Lamps: 1
 Lumens per Lamp: 1579 lm Voltage: 24.0 V
 Current: 0.592 A Power: 14.20 W
 Power Factor: 1.000

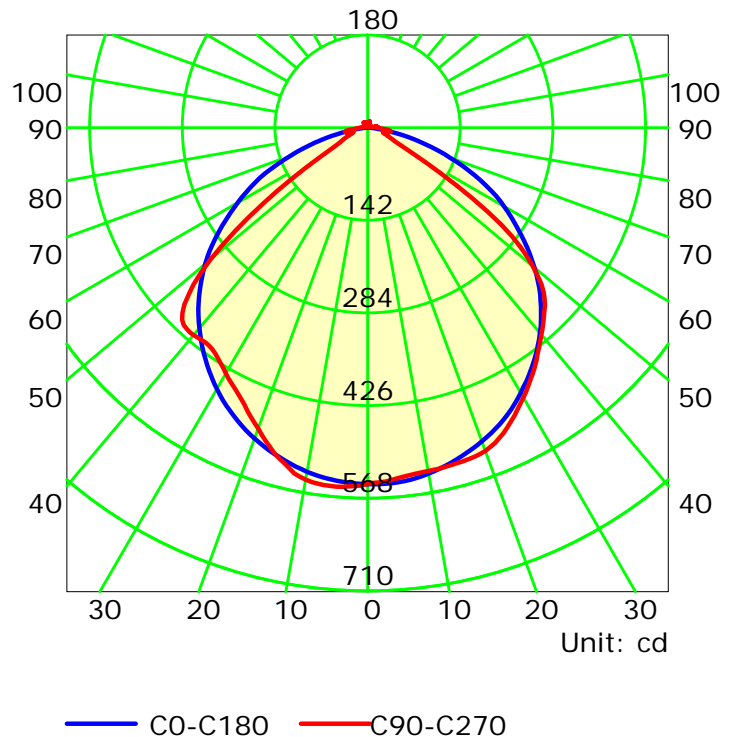
Photometric Results

CIE Class: Direct	Total Rated Lamp Lumens: 1579.0 lm
Measurement Flux: 1434.8 lm	Efficiency: 90.87%
Downward Ratio: 89.08%	Upward Ratio: 1.78%
Field Angle(C0/C180,C90/C270,C45/C225,C135/315): 155.2, 123.0, 135.7, 135.5	
Beam Angle(C0/C180,C90/C270,C45/C225,C135/315): 112.1, 104.4, 115.5, 115.3	
Luminaire Efficacy Rating (LER): 101.09	Central Intensity: 546.91 cd
Max. Intensity: 552.91 cd	Pos of Max. Intensity: H280 V7
S/MH(C0/C180): 1.27	S/MH(C90/C270): 1.24

Picture Of Luminaire



Luminous Intensity Distribution Curve

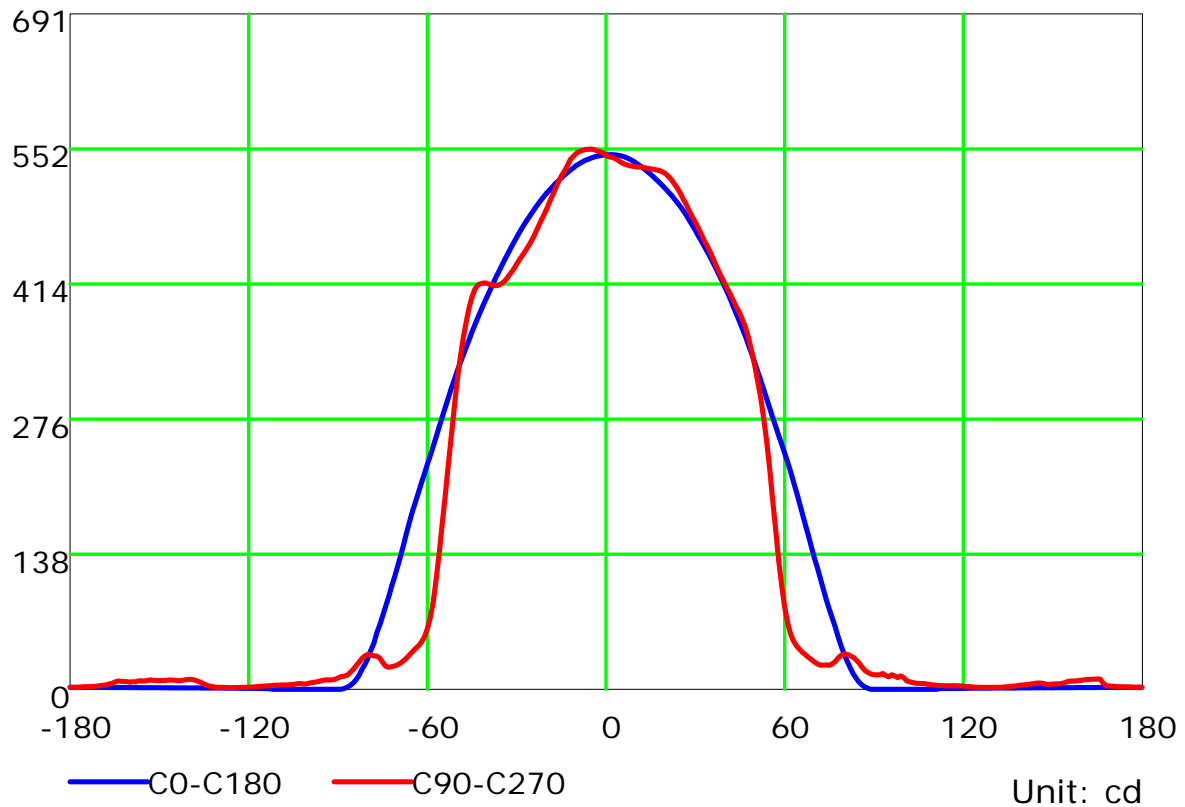
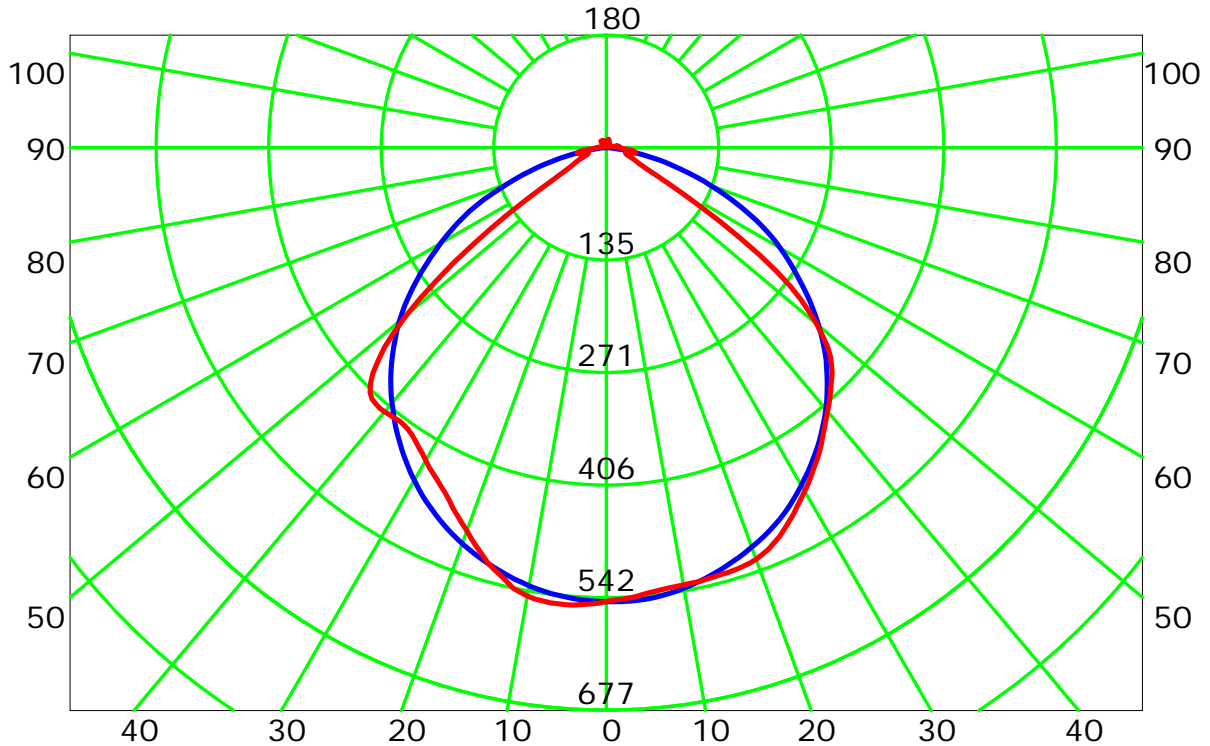


C Plane (°):0.0-360.0: 10.0
 Test Lab:
 Test Type: TYPE C
 Temperature:
 Operator:

Gamma Plane (°):0.0-180.0:1.0
 Test Device: GPM-2000
 Distance: 7.970 m
 Humidity:
 Inspector:



Luminous Intensity Distribution Curve

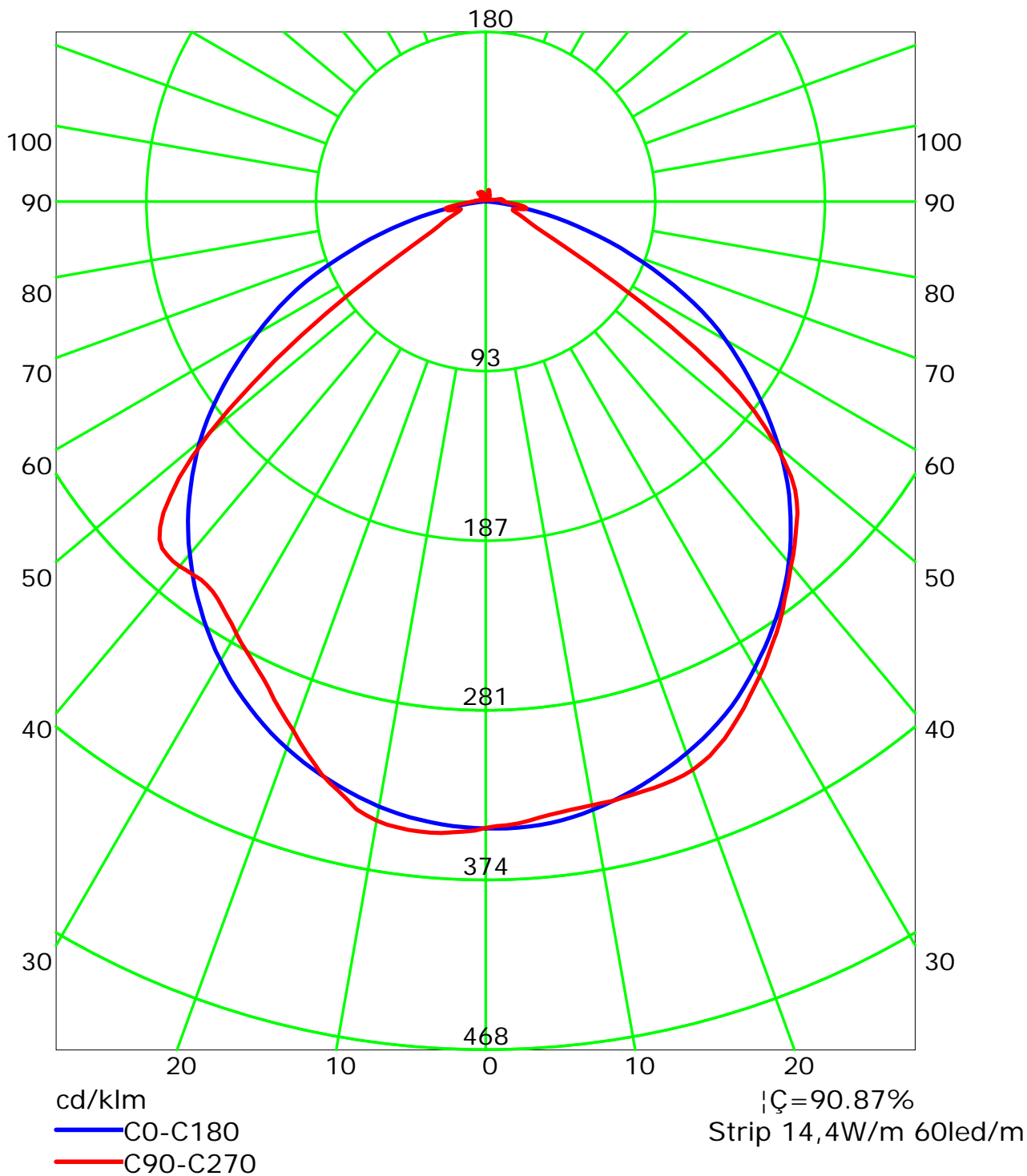


C Plane (°):0.0-360.0: 10.0
 Test Lab:
 Test Type: TYPE C
 Temperature:
 Operator:

Gamma Plane (°):0.0-180.0:1.0
 Test Device: GPM-2000
 Distance: 7.970 m
 Humidity:
 Inspector:



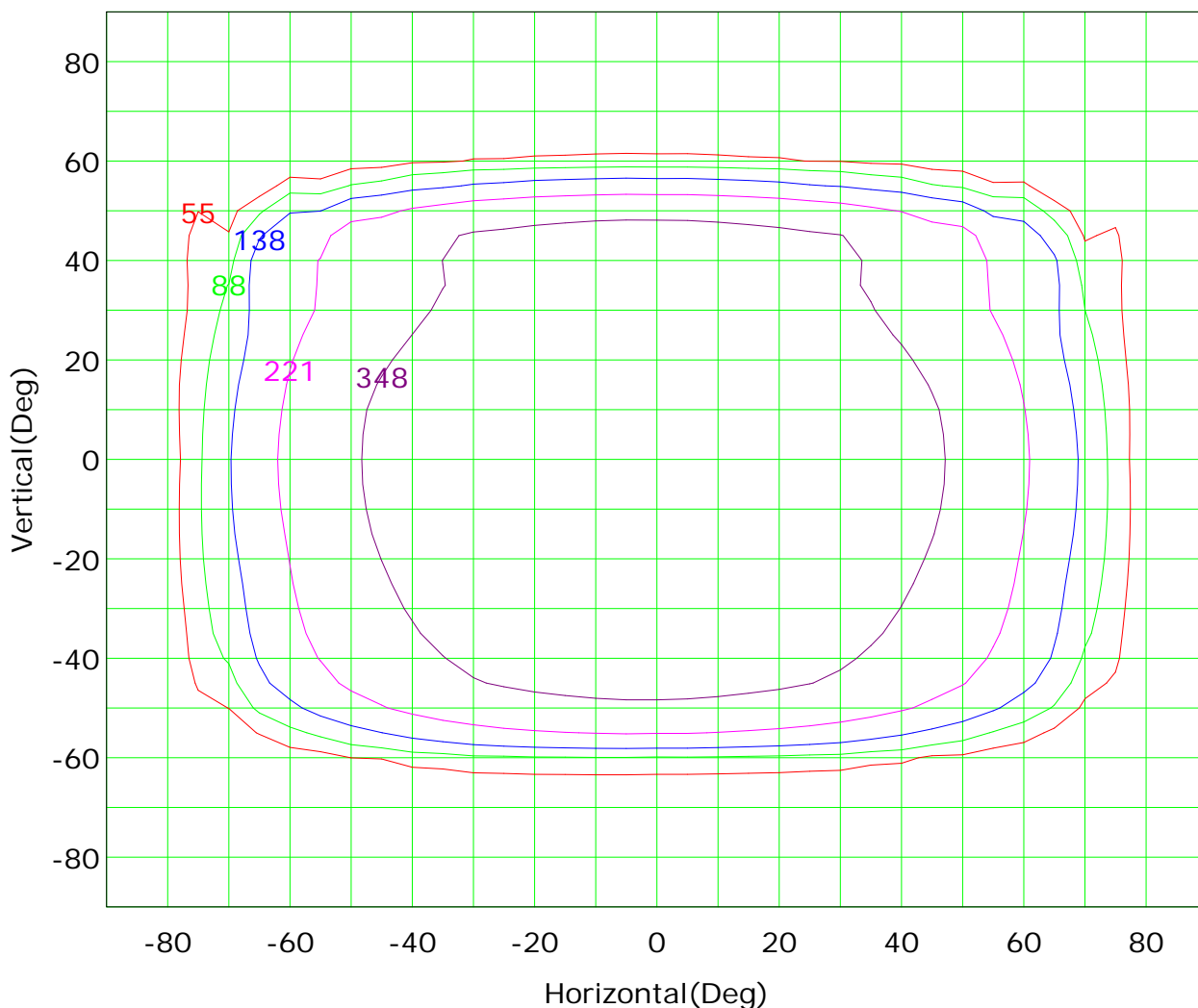
Luminous Intensity Distribution Curve(cd/klm)



C Plane (°):0.0-360.0: 10.0
Test Lab:
Test Type: TYPE C
Temperature:
Operator:

Gamma Plane (°):0.0-180.0:1.0
Test Device: GPM-2000
Distance: 7.970 m
Humidity:
Inspector:

Isocandela (rectangle)



Imax (100%): 553 cd

- | | | | |
|-----------|--------|-----------|--------|
| — (10%): | 55 cd | — (16%): | 88 cd |
| — (25%): | 138 cd | — (40%): | 221 cd |
| — (63%): | 348 cd | — (100%): | 553 cd |

C Plane (°):0.0-360.0: 10.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

Test Device: GPM-2000

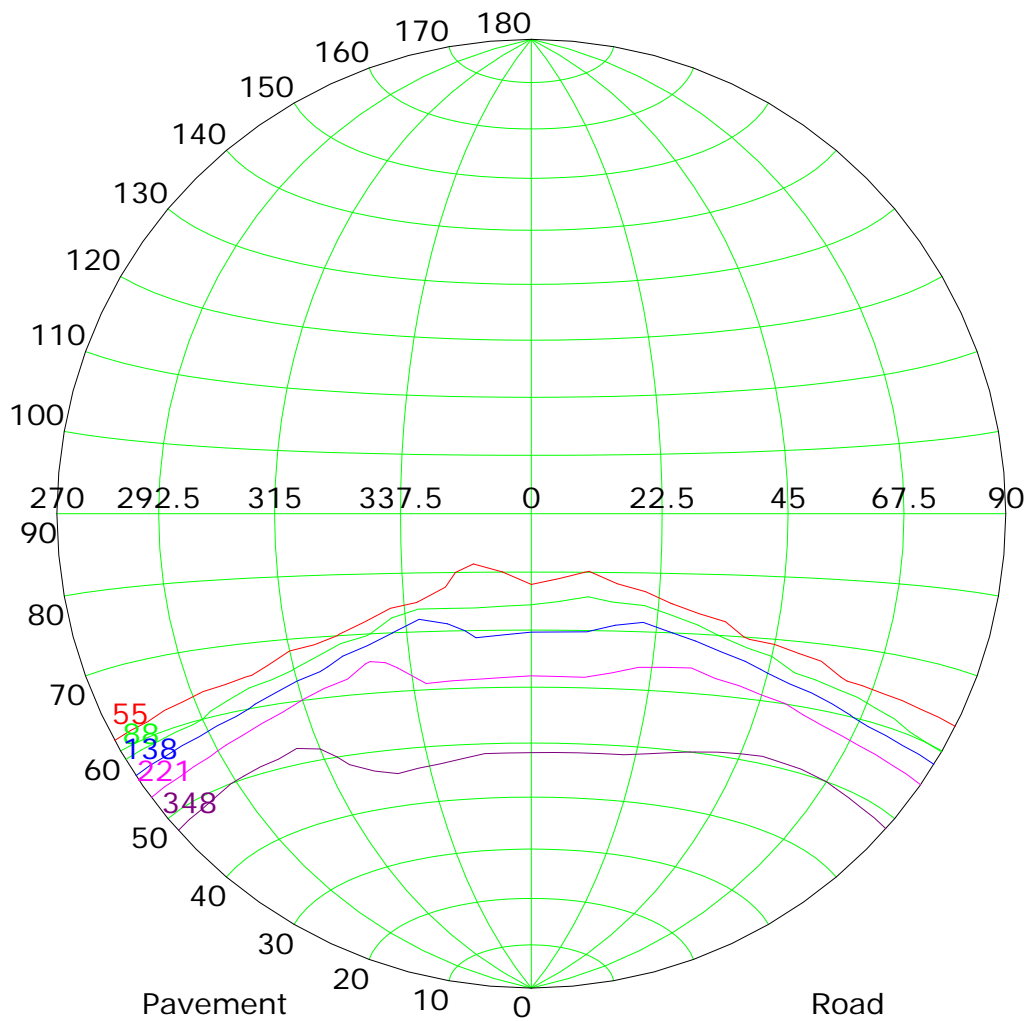
Distance: 7.970 m

Humidity:

Inspector:



Isocandela (sphere)



Imax (100%): 553 cd

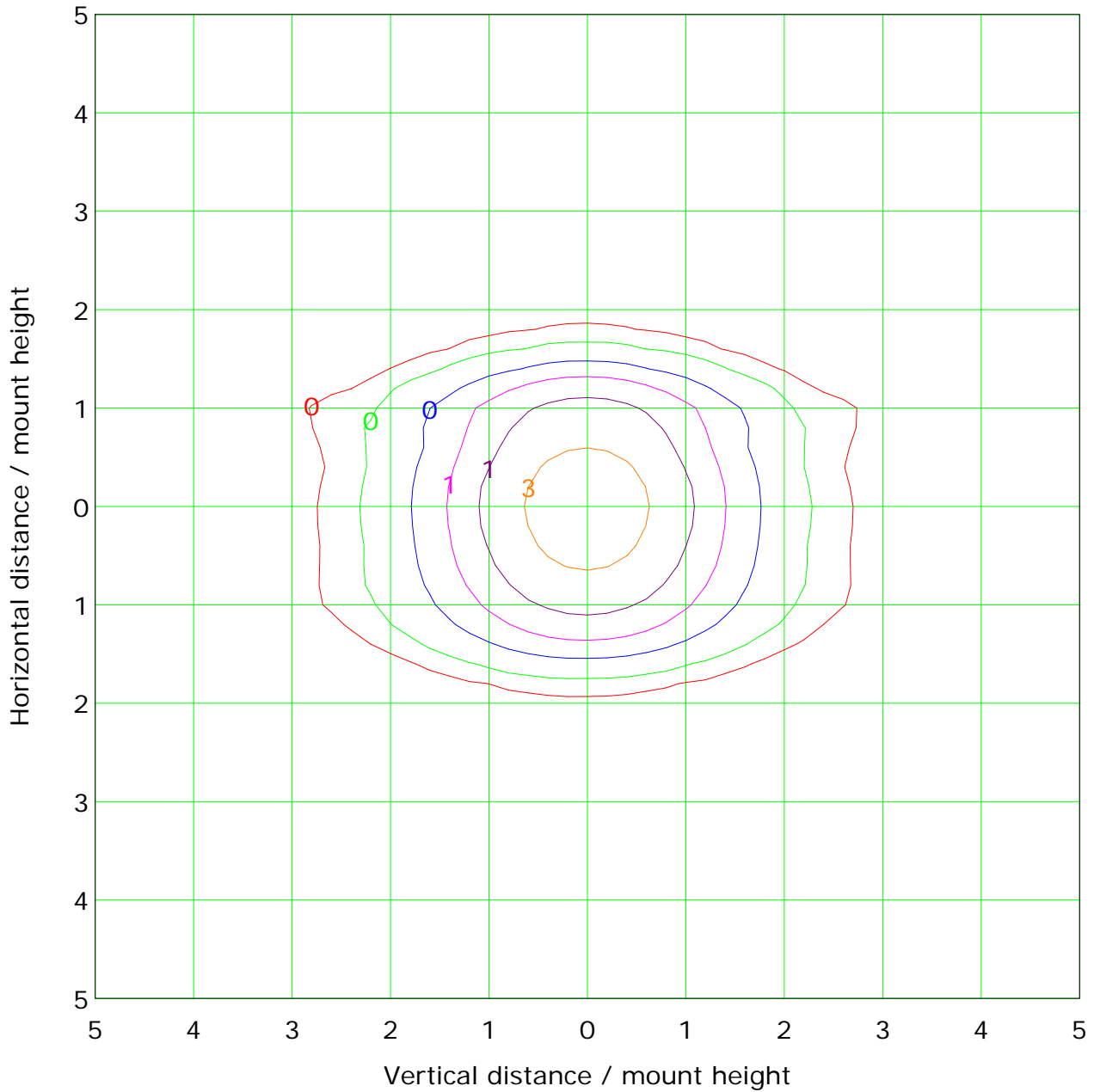
- | | | | |
|-----------|--------|-----------|--------|
| — (10%): | 55 cd | — (16%): | 88 cd |
| — (25%): | 138 cd | — (40%): | 221 cd |
| — (63%): | 348 cd | — (100%): | 553 cd |

C Plane (°):0.0-360.0: 10.0
 Test Lab:
 Test Type: TYPE C
 Temperature:
 Operator:

Gamma Plane (°):0.0-180.0:1.0
 Test Device: GPM-2000
 Distance: 7.970 m
 Humidity:
 Inspector:



IsoLux Plot



Mounting Height: 10.0m		Max Lux(100%): 5.5 lx	
— (1%):	0.1 lx	— (2%):	0.1 lx
— (5%):	0.3 lx	— (10%):	0.5 lx
— (20%):	1.1 lx	— (50%):	2.7 lx
— (100%):	5.5 lx		

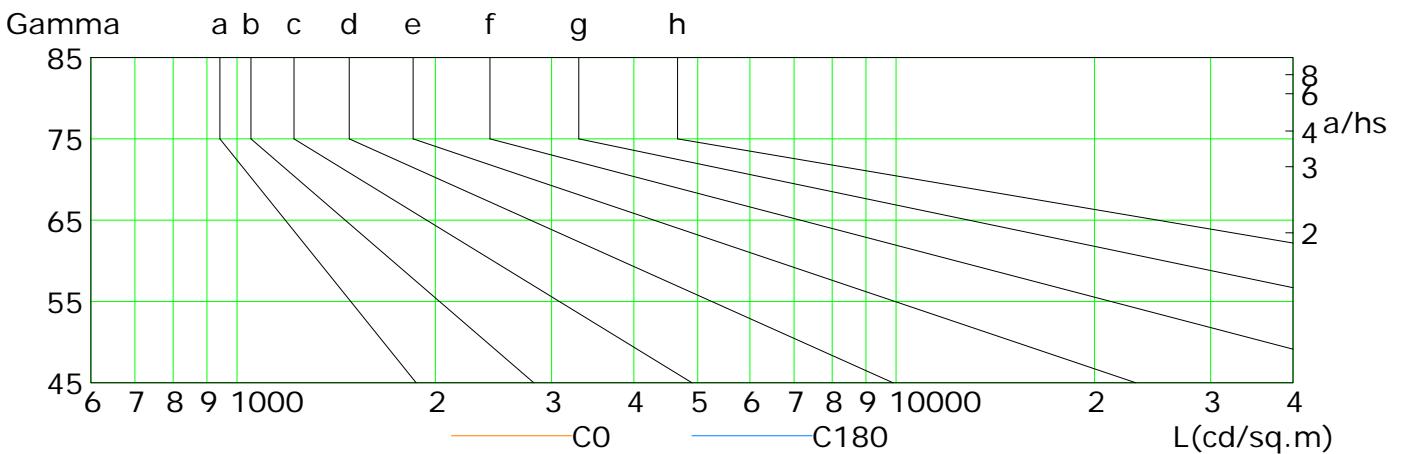
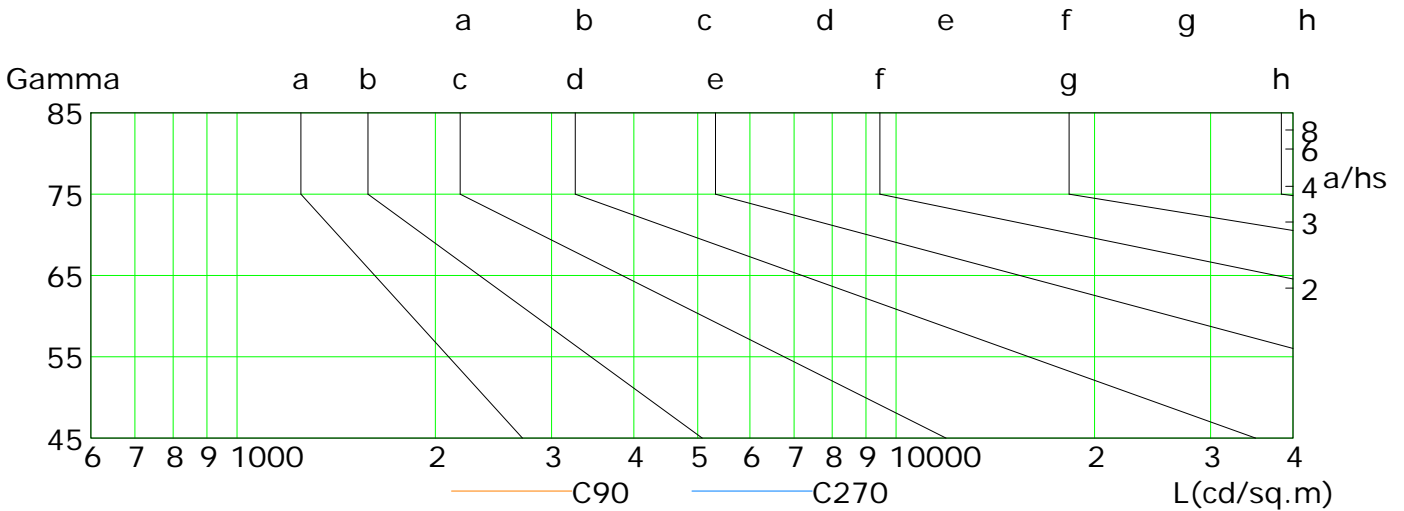
C Plane (°):0.0-360.0: 10.0
 Test Lab:
 Test Type: TYPE C
 Temperature:
 Operator:

Gamma Plane (°):0.0-180.0:1.0
 Test Device: GPM-2000
 Distance: 7.970 m
 Humidity:
 Inspector:



Lum Limit Curve

Dazzle	Quality	Illuminance (lx)							
		a	b	c	d	e	f	g	h
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



L(cd/sq.m)	G45	G50	G55	G60	G65	G70	G75	G80	G85
C0	375	334	288	242	191	134	82	36	7
C90	385	331	225	84	41	28	25	36	27
C180	366	326	279	230	182	126	75	32	6
C270	402	315	170	62	39	25	28	36	20

C Plane (°):0.0-360.0: 10.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

Test Device: GPM-2000

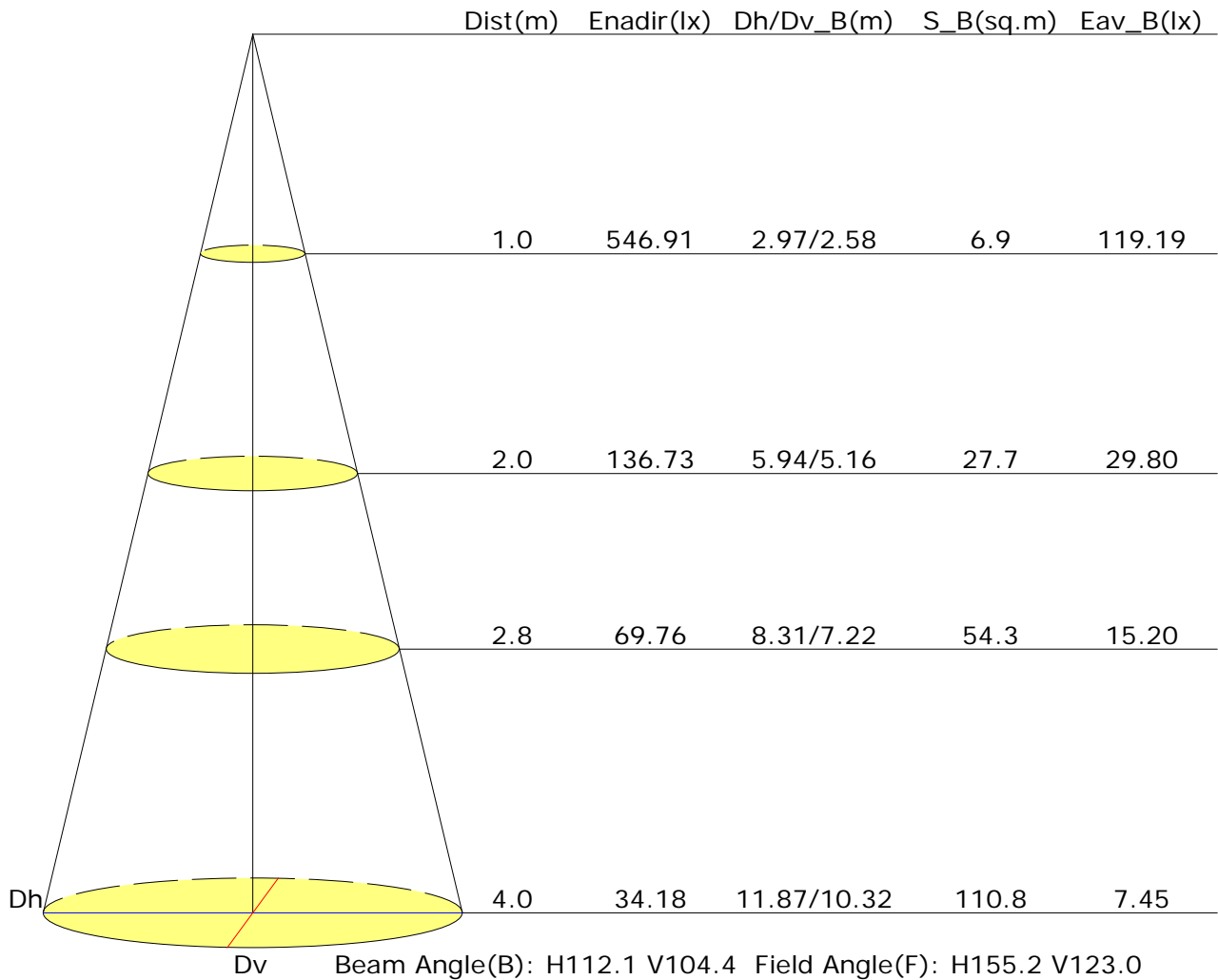
Distance: 7.970 m

Humidity:

Inspector:



Illuminance at a Distance

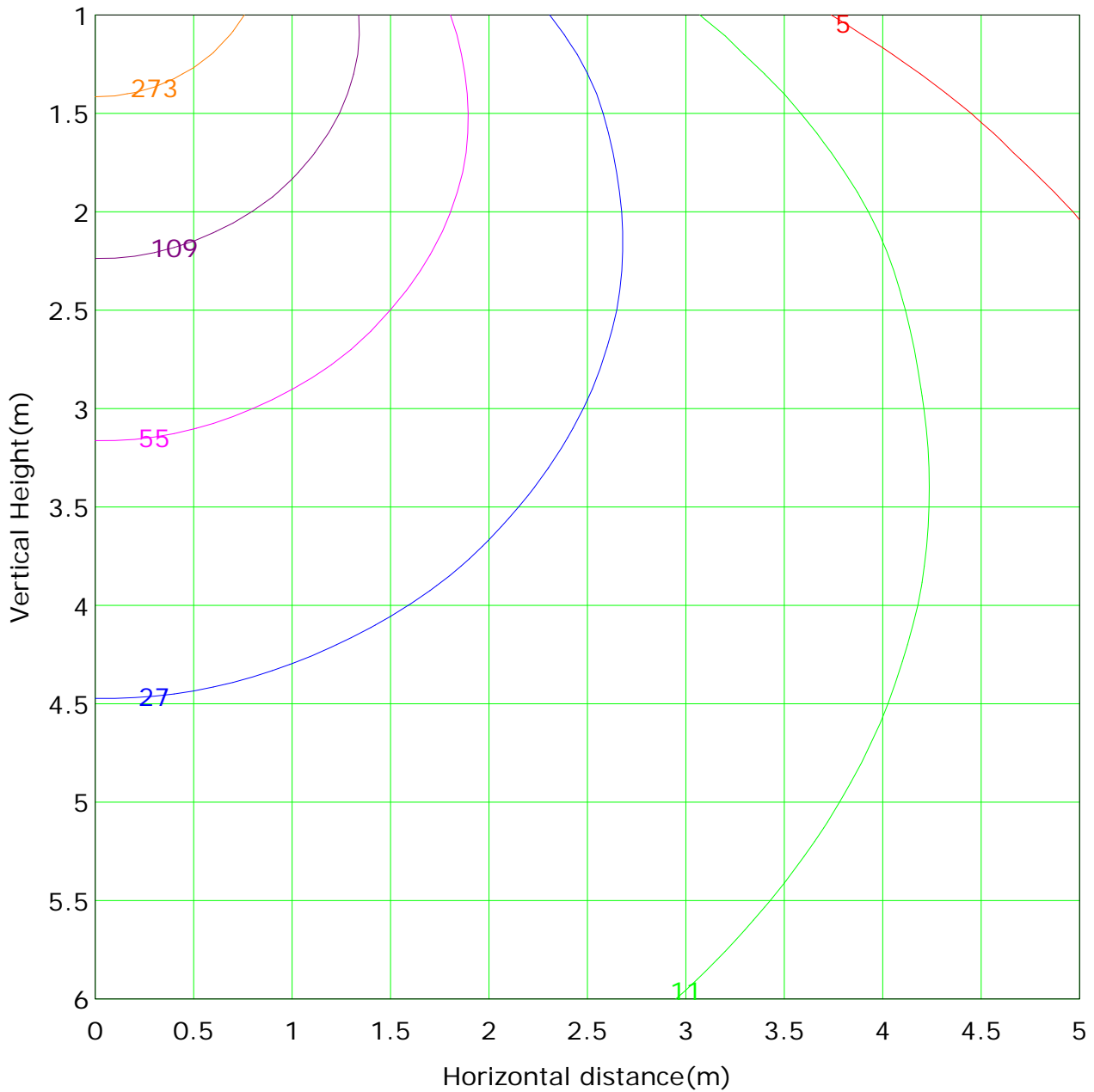


C Plane (°):0.0-360.0: 10.0
 Test Lab:
 Test Type: TYPE C
 Temperature:
 Operator:

Gamma Plane (°):0.0-180.0:1.0
 Test Device: GPM-2000
 Distance: 7.970 m
 Humidity:
 Inspector:



Vertical IsoLux Plot



Lowest(m): 1.0m	Highest(m): 6.0m	Max Lux: 546.9 lx
— (1%): 5.5 lx	— (2%): 10.9 lx	
— (5%): 27.3 lx	— (10%): 54.7 lx	
— (20%): 109.4 lx	— (50%): 273.5 lx	
— (100%): 546.9 lx		

C Plane (°):0.0-360.0: 10.0
 Test Lab:
 Test Type: TYPE C
 Temperature:
 Operator:

Gamma Plane (°):0.0-180.0:1.0
 Test Device: GPM-2000
 Distance: 7.970 m
 Humidity:
 Inspector:



Report No.:

Test Time: 06/09/2018 14:33

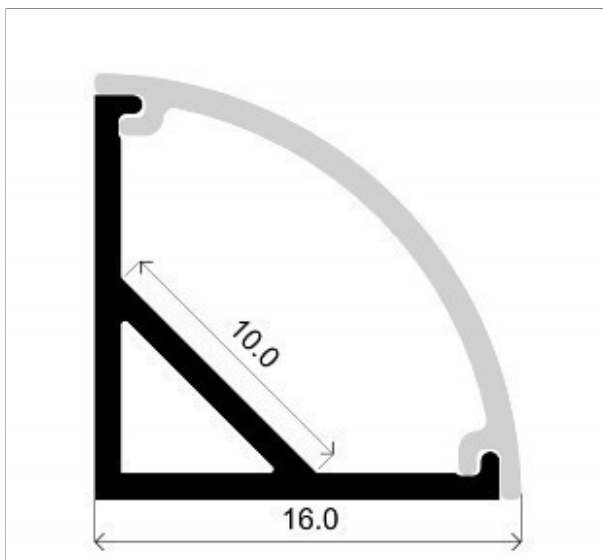
Luminaire Property

Luminaire Manufacturer: Lighting Line
 Luminaire Description: LLP-AN02-08 + LLD-08-UM
 Lamp Description: Strip 14,4W/m 60led/m Number of Lamps: 1
 Lumens per Lamp: 1579 lm Voltage: 24.0 V
 Current: 0.593 A Power: 14.22 W
 Power Factor: 1.000

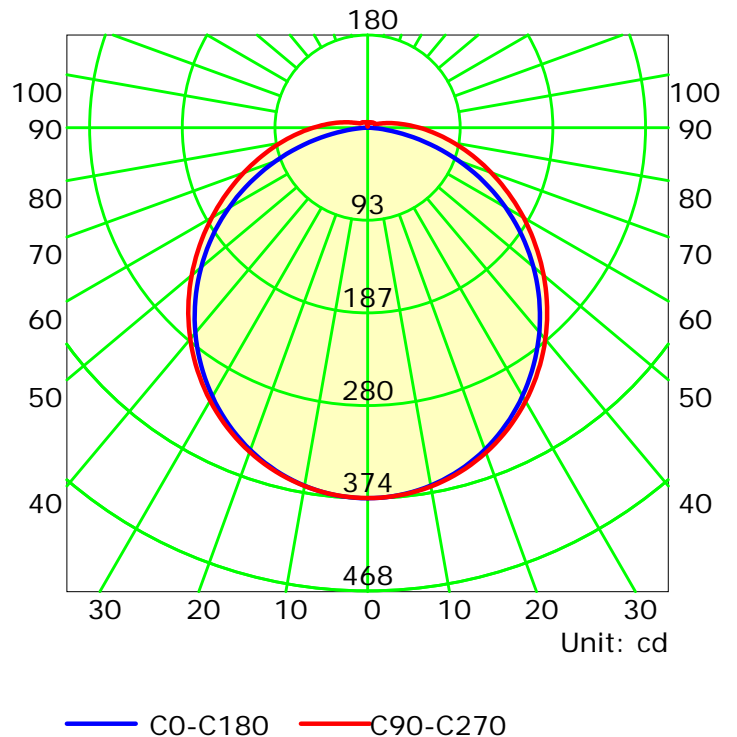
Photometric Results

CIE Class: Direct	Total Rated Lamp Lumens: 1579.0 lm
Measurement Flux: 1188 lm	Efficiency: 75.24%
Downward Ratio: 71.79%	Upward Ratio: 3.45%
Field Angle(C0/C180,C90/C270,C45/C225,C135/315): 159.6, 191.8, 176.7, 176.0	
Beam Angle(C0/C180,C90/C270,C45/C225,C135/315): 111.3, 117.9, 114.2, 114.0	
Luminaire Efficacy Rating (LER): 83.60	Central Intensity: 374.59 cd
Max. Intensity: 374.65 cd	Pos of Max. Intensity: H30 V0
S/MH(C0/C180): 1.24	S/MH(C90/C270): 1.27

Picture Of Luminaire



Luminous Intensity Distribution Curve

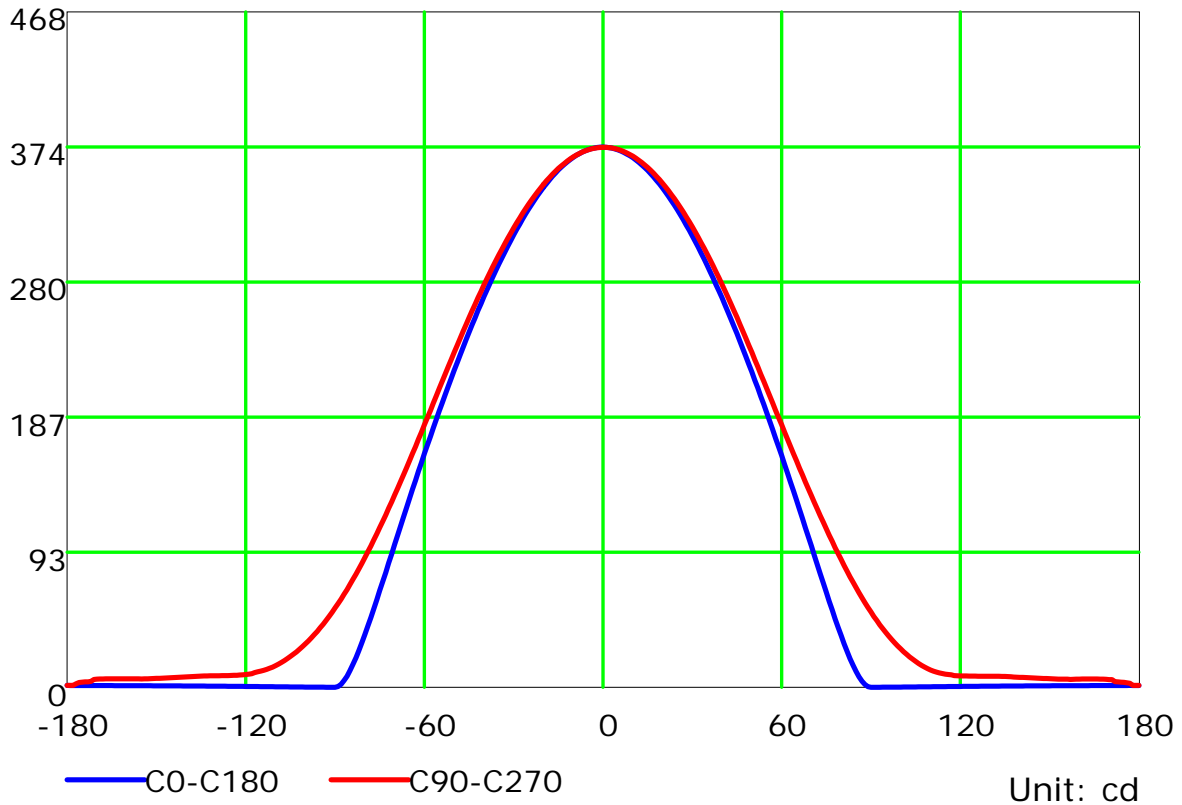
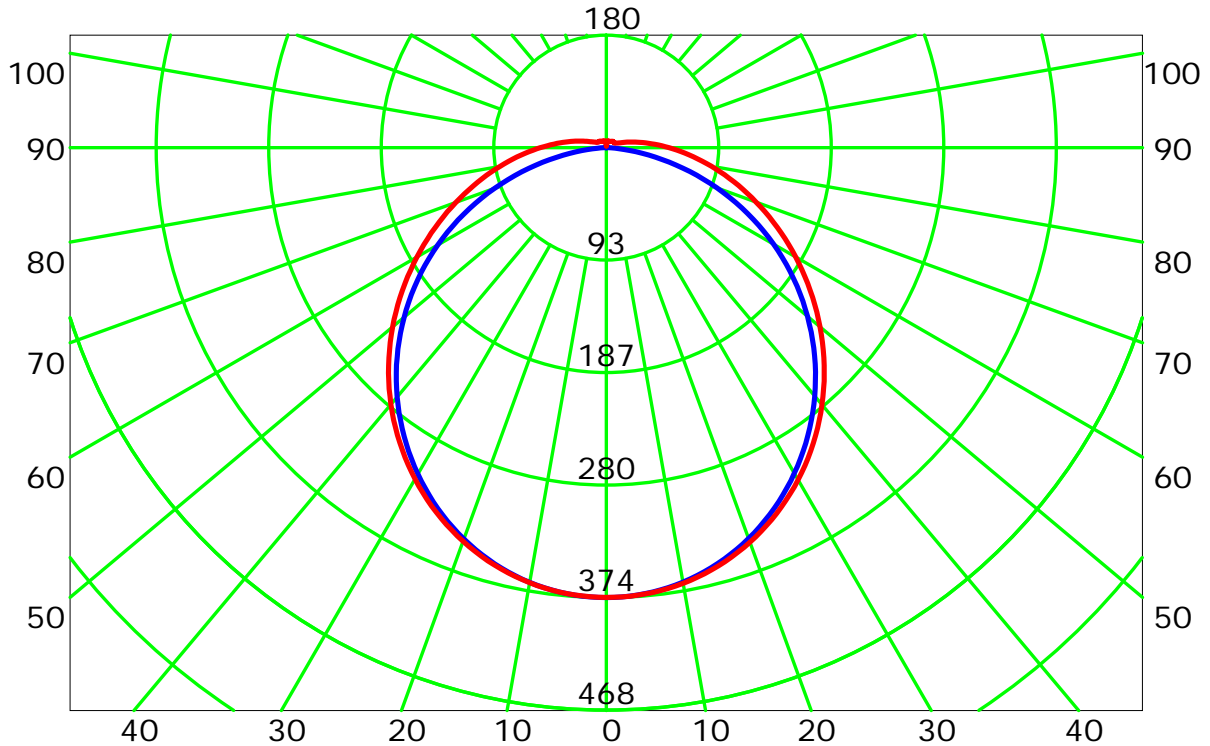


C Plane (°):0.0-360.0: 10.0
 Test Lab:
 Test Type: TYPE C
 Temperature:
 Operator:

Gamma Plane (°):0.0-180.0:1.0
 Test Device: GPM-2000
 Distance: 7.970 m
 Humidity:
 Inspector:



Luminous Intensity Distribution Curve

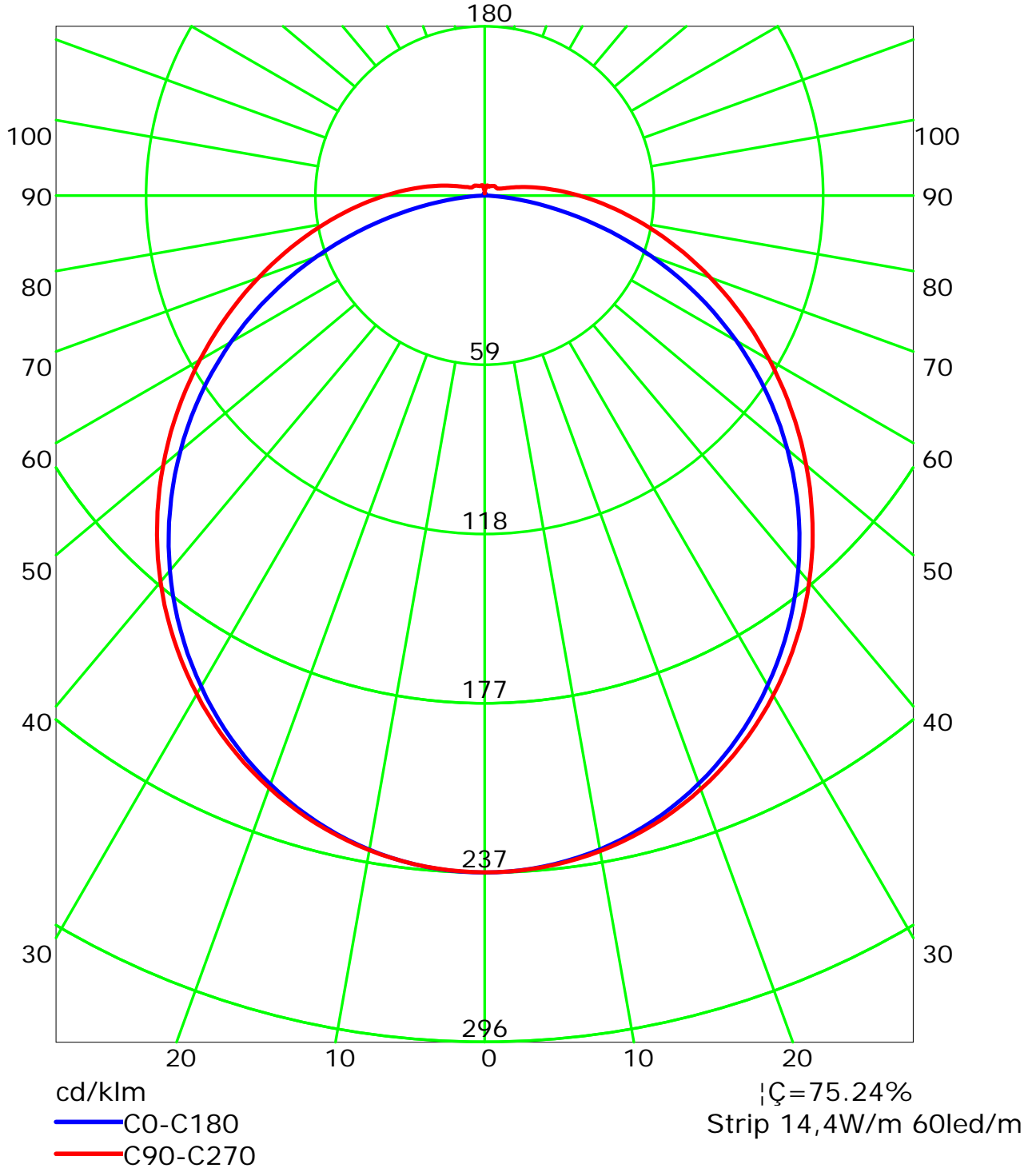


C Plane (°):0.0-360.0: 10.0
Test Lab:
Test Type: TYPE C
Temperature:
Operator:

Gamma Plane (°):0.0-180.0:1.0
Test Device: GPM-2000
Distance: 7.970 m
Humidity:
Inspector:



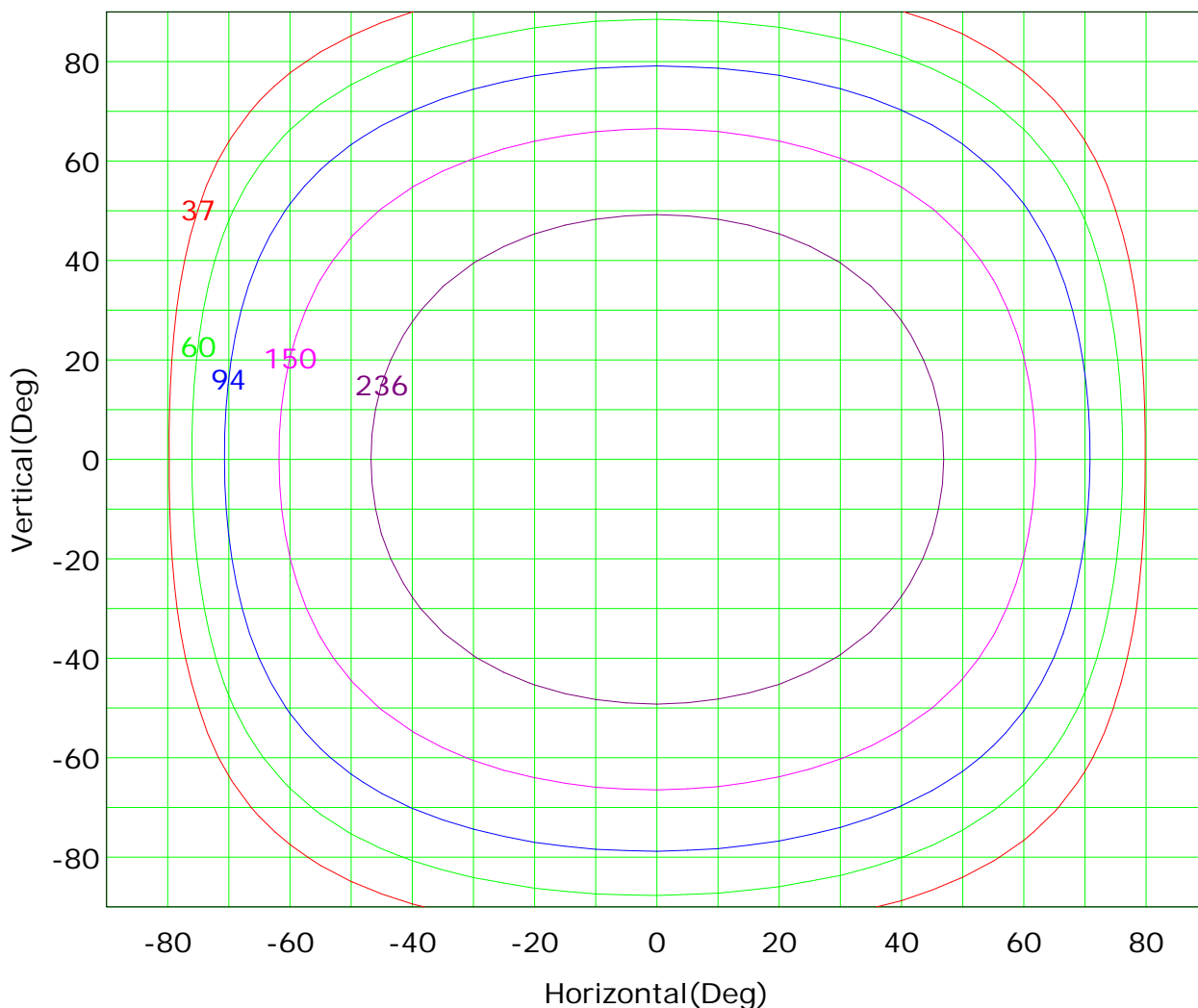
Luminous Intensity Distribution Curve(cd/klm)



C Plane (°):0.0-360.0: 10.0
Test Lab:
Test Type: TYPE C
Temperature:
Operator:

Gamma Plane (°):0.0-180.0:1.0
Test Device: GPM-2000
Distance: 7.970 m
Humidity:
Inspector:

Isocandela (rectangle)



Imax (100%): 375 cd

- | | | | |
|-----------|--------|-----------|--------|
| — (10%): | 37 cd | — (16%): | 60 cd |
| — (25%): | 94 cd | — (40%): | 150 cd |
| — (63%): | 236 cd | — (100%): | 375 cd |

C Plane (°):0.0-360.0: 10.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

Test Device: GPM-2000

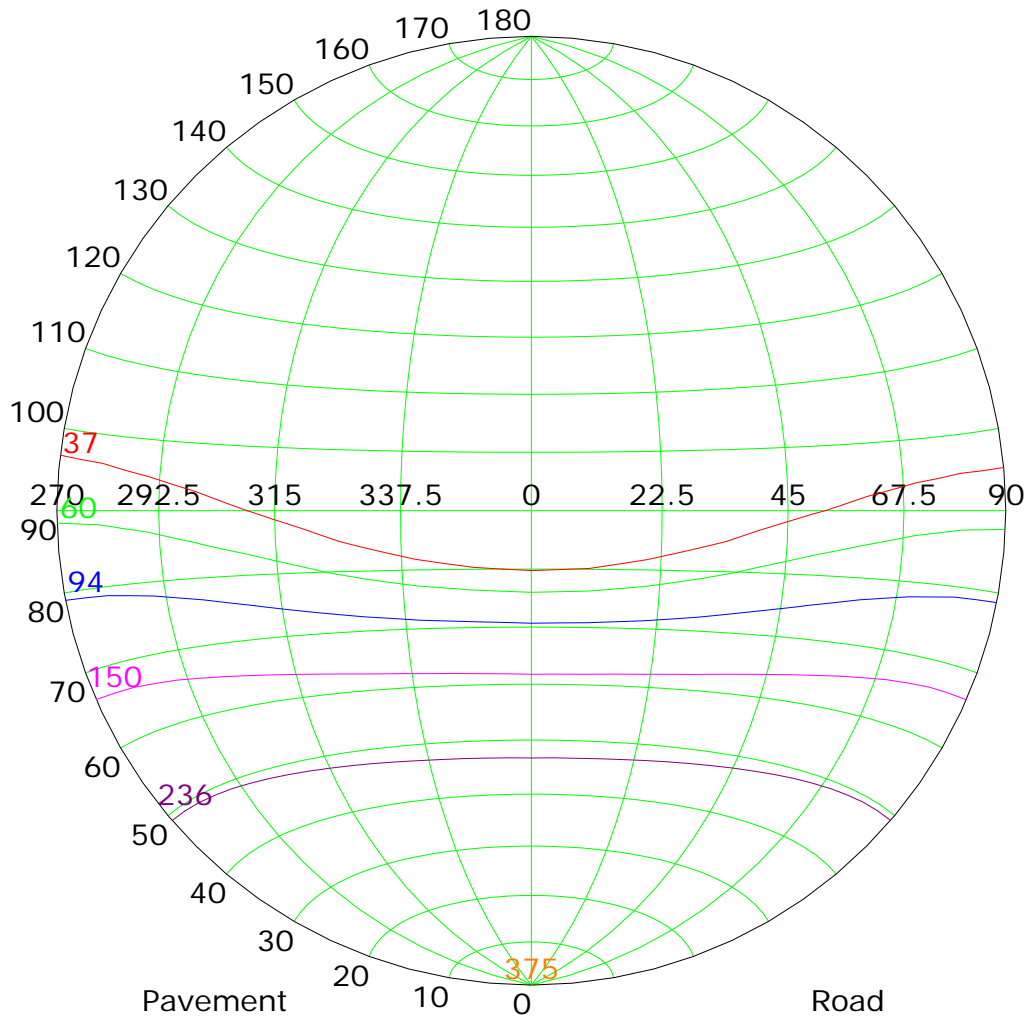
Distance: 7.970 m

Humidity:

Inspector:



Isocandela (sphere)



Imax (100%): 375 cd

— (10%):	37 cd	— (16%):	60 cd
— (25%):	94 cd	— (40%):	150 cd
— (63%):	236 cd	— (100%):	375 cd

C Plane (°):0.0-360.0: 10.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

Test Device: GPM-2000

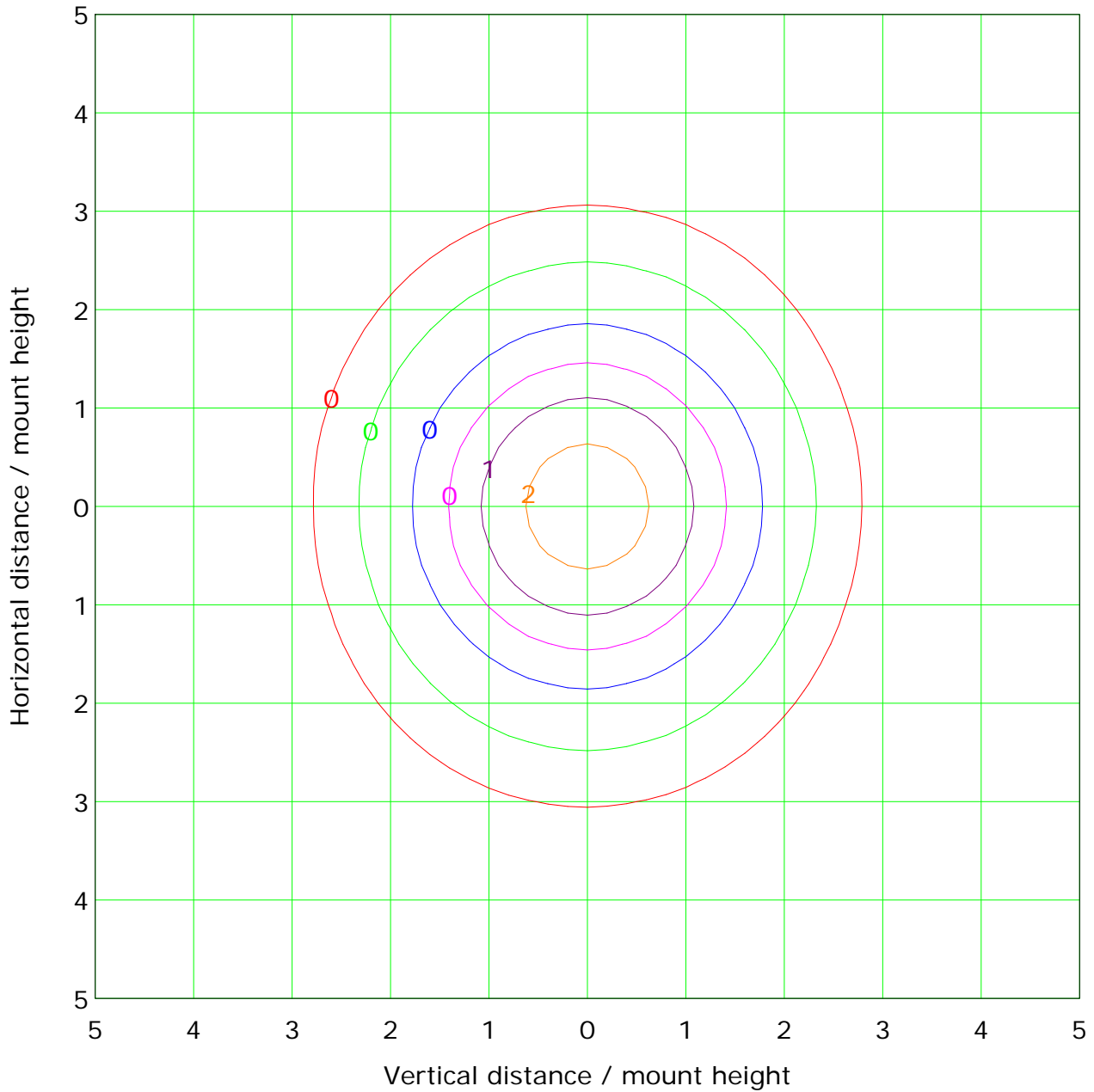
Distance: 7.970 m

Humidity:

Inspector:



IsoLux Plot



Mounting Height: 10.0m		Max Lux(100%): 3.7 lx	
— (1%):	0.0 lx	— (2%):	0.1 lx
— (5%):	0.2 lx	— (10%):	0.4 lx
— (20%):	0.7 lx	— (50%):	1.9 lx
— (100%):	3.7 lx		

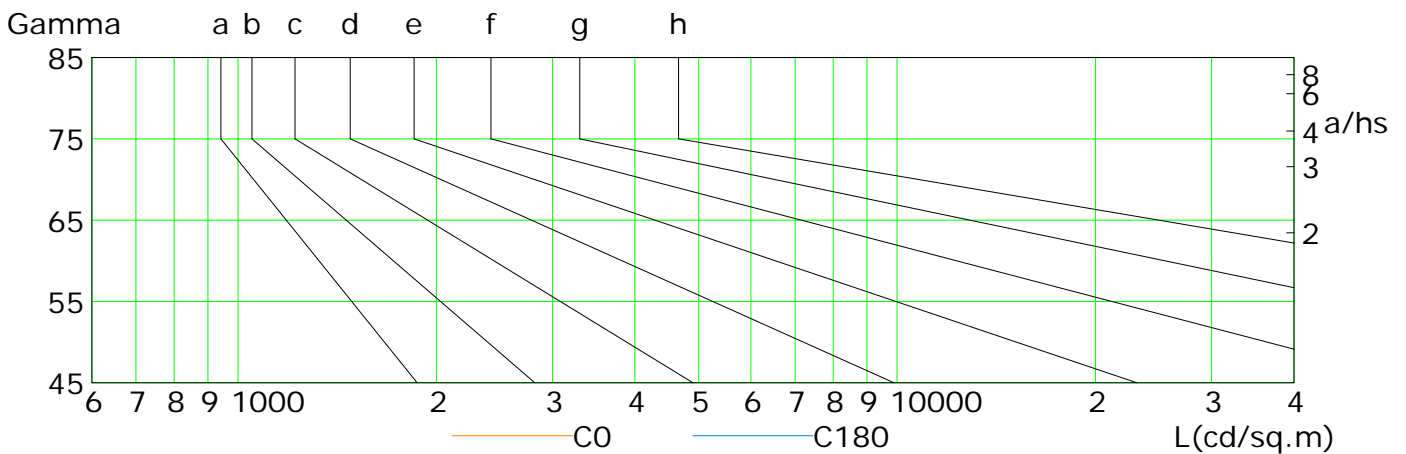
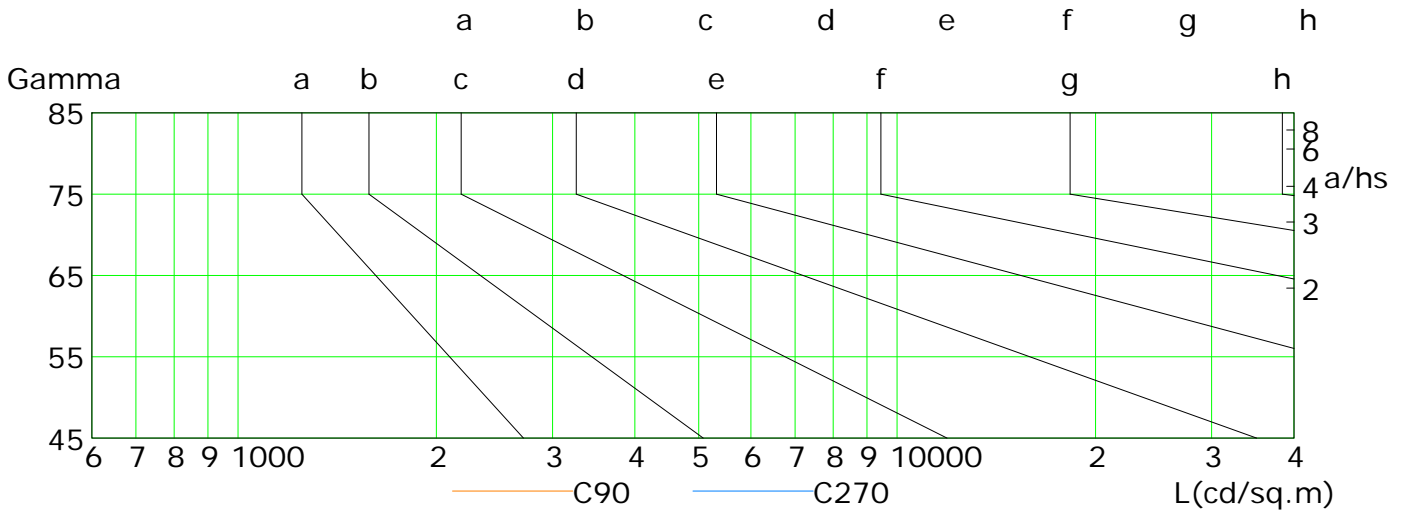
C Plane (°):0.0-360.0: 10.0
 Test Lab:
 Test Type: TYPE C
 Temperature:
 Operator:

Gamma Plane (°):0.0-180.0:1.0
 Test Device: GPM-2000
 Distance: 7.970 m
 Humidity:
 Inspector:



Lum Limit Curve

Dazzle	Quality	Illuminance (lx)							
		a	b	c	d	e	f	g	h
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



L(cd/sq.m)	G45	G50	G55	G60	G65	G70	G75	G80	G85
C0	245	219	190	161	130	98	66	36	11
C90	257	232	207	182	157	133	110	89	69
C180	246	220	192	162	131	99	67	37	12
C270	256	232	207	182	157	133	111	90	71

C Plane (°):0.0-360.0: 10.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

Test Device: GPM-2000

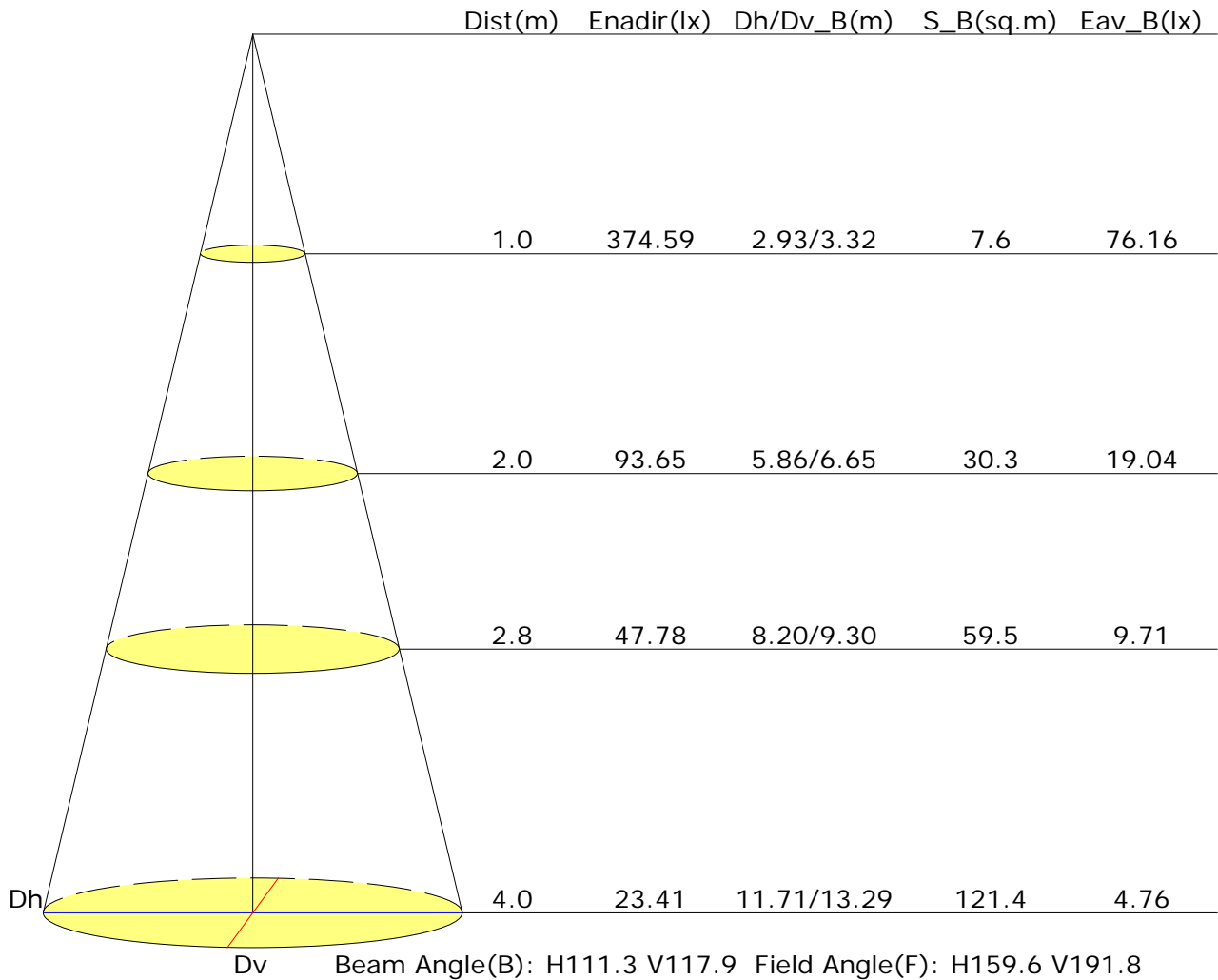
Distance: 7.970 m

Humidity:

Inspector:

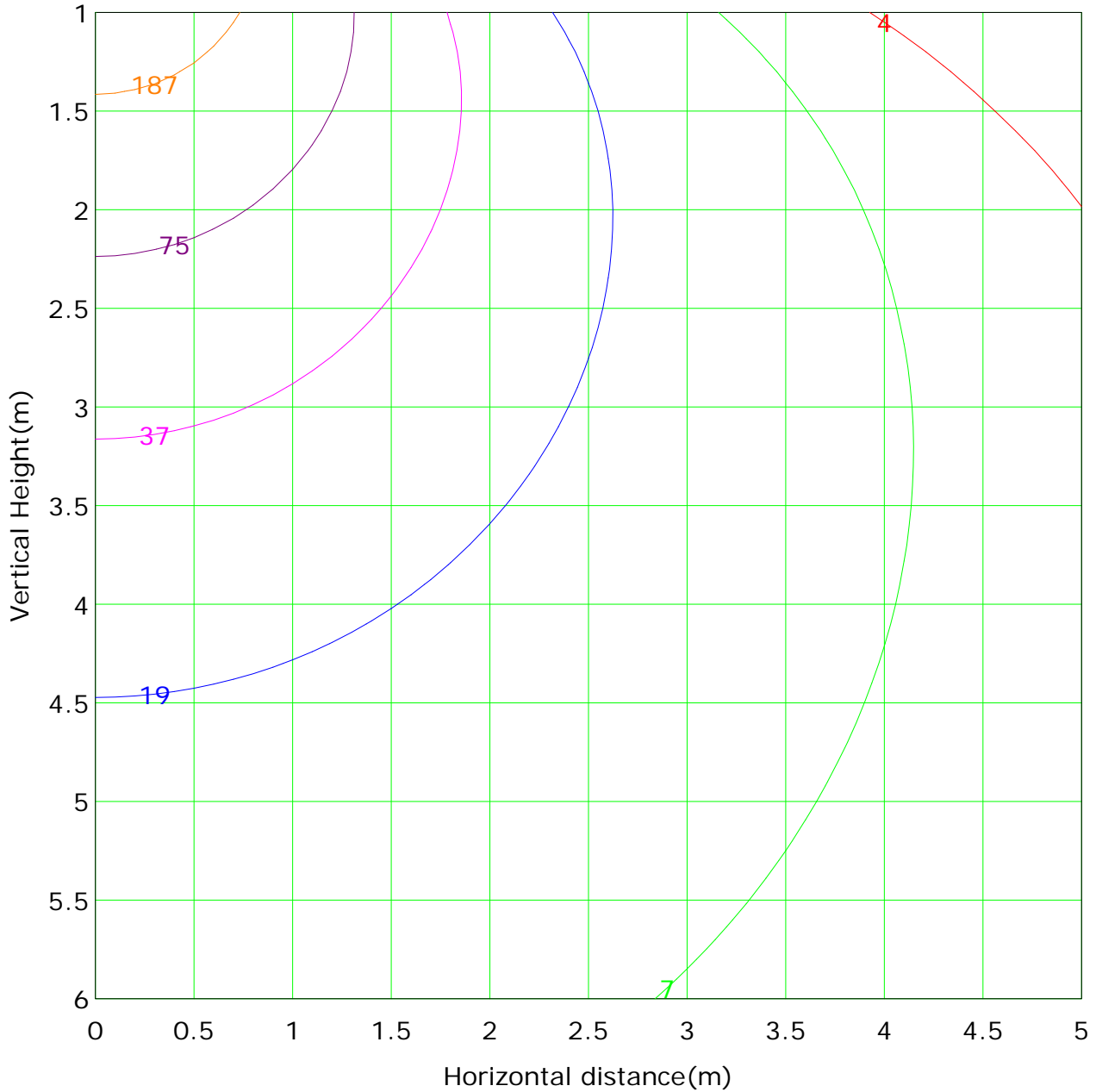


Illuminance at a Distance





Vertical IsoLux Plot



Lowest(m): 1.0m	Highest(m): 6.0m	Max Lux: 374.6 lx
— (1%): 3.7 lx	— (2%): 7.5 lx	
— (5%): 18.7 lx	— (10%): 37.5 lx	
— (20%): 74.9 lx	— (50%): 187.3 lx	
— (100%): 374.6 lx		

C Plane (°):0.0-360.0: 10.0
 Test Lab:
 Test Type: TYPE C
 Temperature:
 Operator:

Gamma Plane (°):0.0-180.0:1.0
 Test Device: GPM-2000
 Distance: 7.970 m
 Humidity:
 Inspector:



Report No.:

Test Time: 06/09/2018 15:51

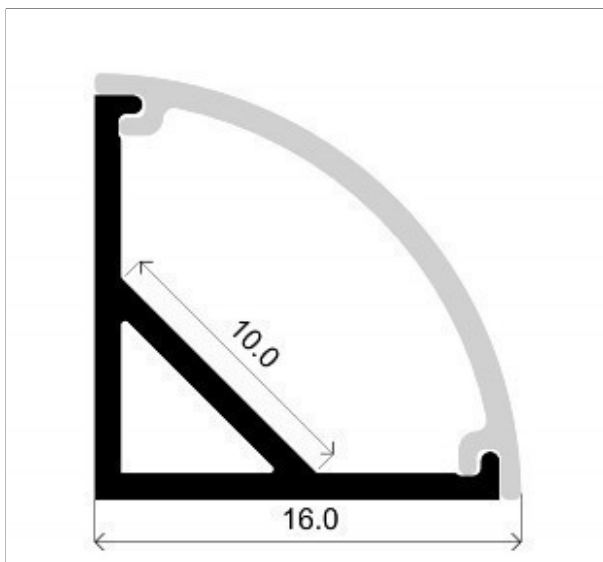
Luminaire Property

Luminaire Manufacturer: Lighting Line
 Luminaire Description: LLP-AN02-08 + LLD-08-US
 Lamp Description: Strip 14,4W/m 60led/m Number of Lamps: 1
 Lumens per Lamp: 1579 lm Voltage: 24.0 V
 Current: 0.593 A Power: 14.22 W
 Power Factor: 1.000

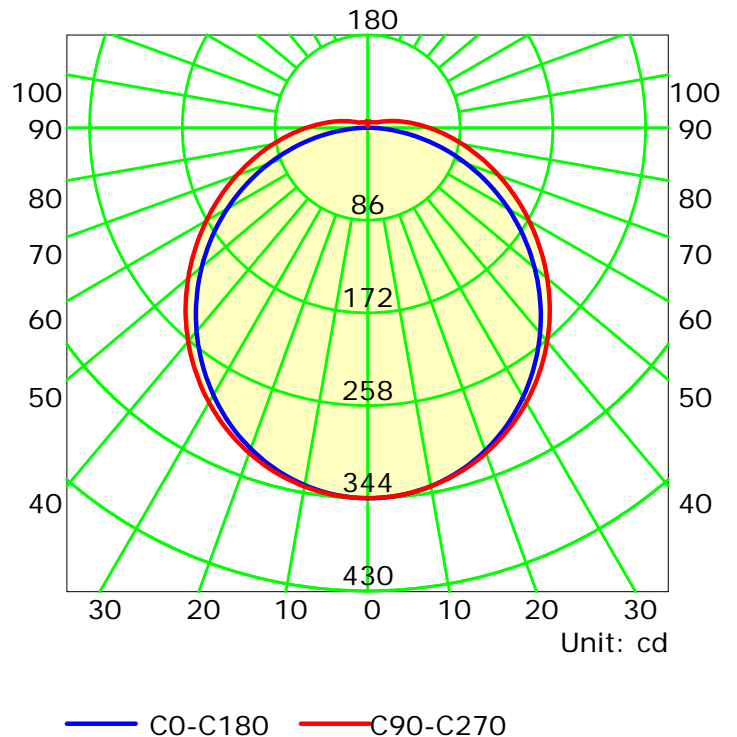
Photometric Results

CIE Class: Direct	Total Rated Lamp Lumens: 1579.0 lm
Measurement Flux: 1131.7 lm	Efficiency: 71.67%
Downward Ratio: 67.78%	Upward Ratio: 3.88%
Field Angle(C0/C180,C90/C270,C45/C225,C135/315): 163.8, 198.4, 181.9, 181.4	
Beam Angle(C0/C180,C90/C270,C45/C225,C135/315): 111.8, 120.5, 115.7, 115.5	
Luminaire Efficacy Rating (LER): 79.63	Central Intensity: 344.67 cd
Max. Intensity: 344.68 cd	Pos of Max. Intensity: H0 V0
S/MH(C0/C180): 1.24	S/MH(C90/C270): 1.27

Picture Of Luminaire



Luminous Intensity Distribution Curve

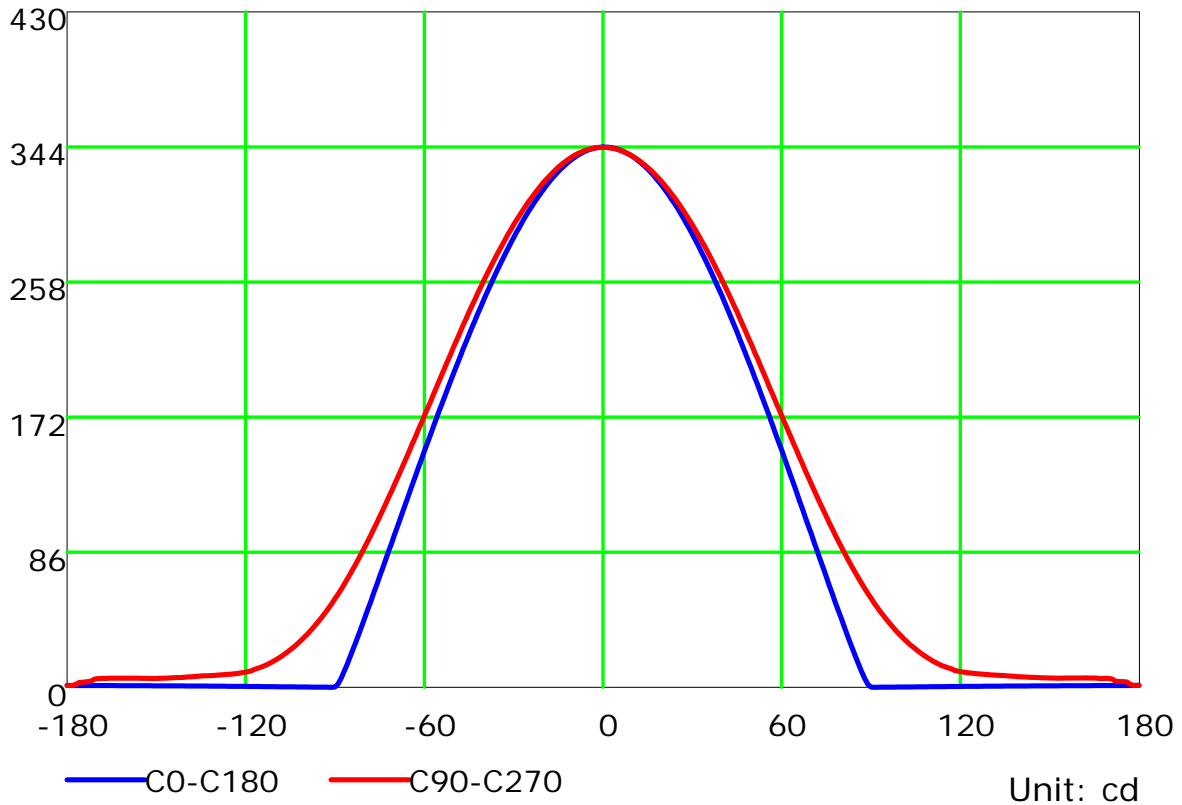
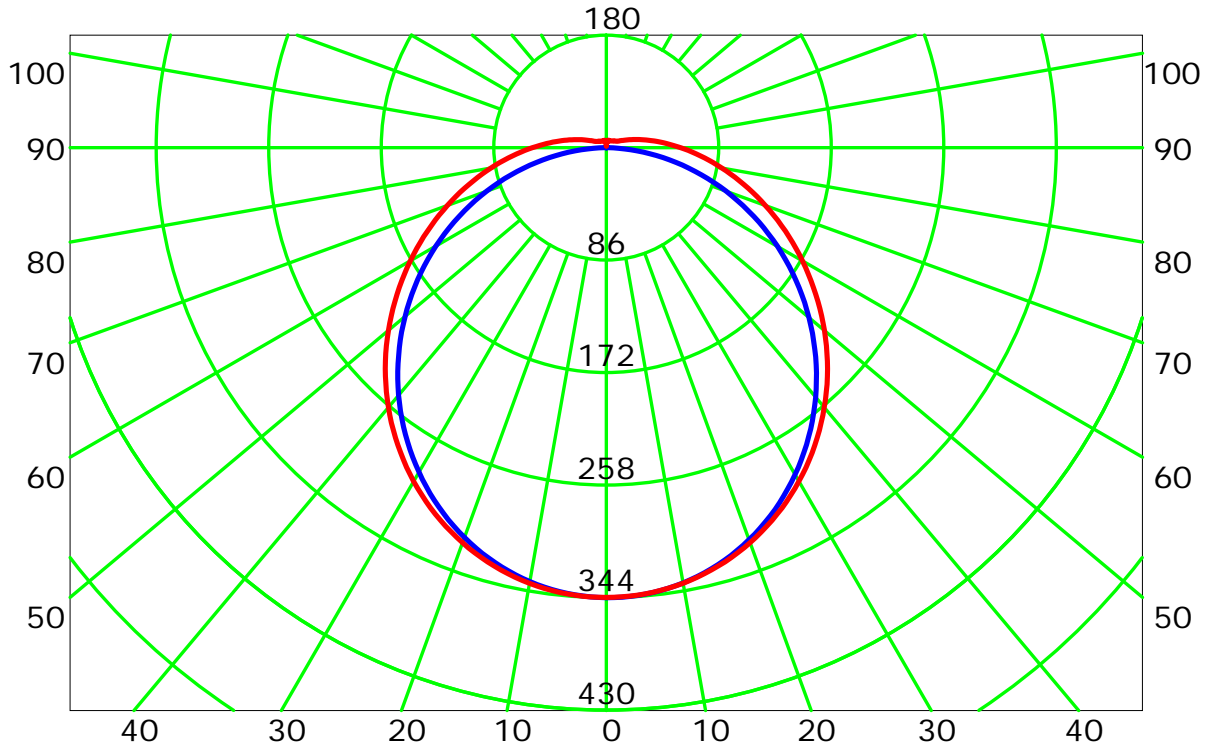


C Plane (°):0.0-360.0: 10.0
 Test Lab:
 Test Type: TYPE C
 Temperature:
 Operator:

Gamma Plane (°):0.0-180.0:1.0
 Test Device: GPM-2000
 Distance: 7.970 m
 Humidity:
 Inspector:



Luminous Intensity Distribution Curve

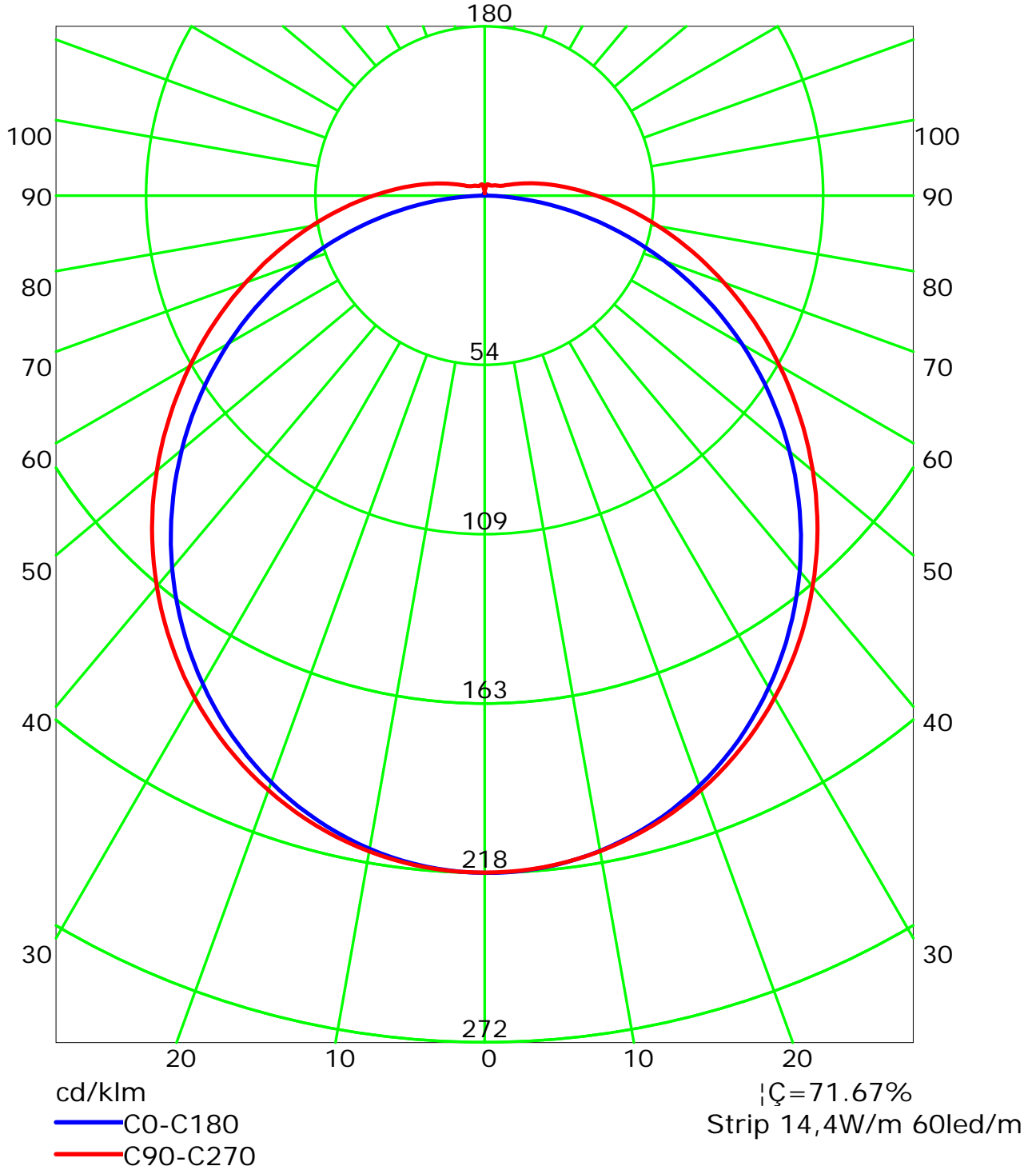


C Plane (°):0.0-360.0: 10.0
Test Lab:
Test Type: TYPE C
Temperature:
Operator:

Gamma Plane (°):0.0-180.0:1.0
Test Device: GPM-2000
Distance: 7.970 m
Humidity:
Inspector:



Luminous Intensity Distribution Curve(cd/klm)

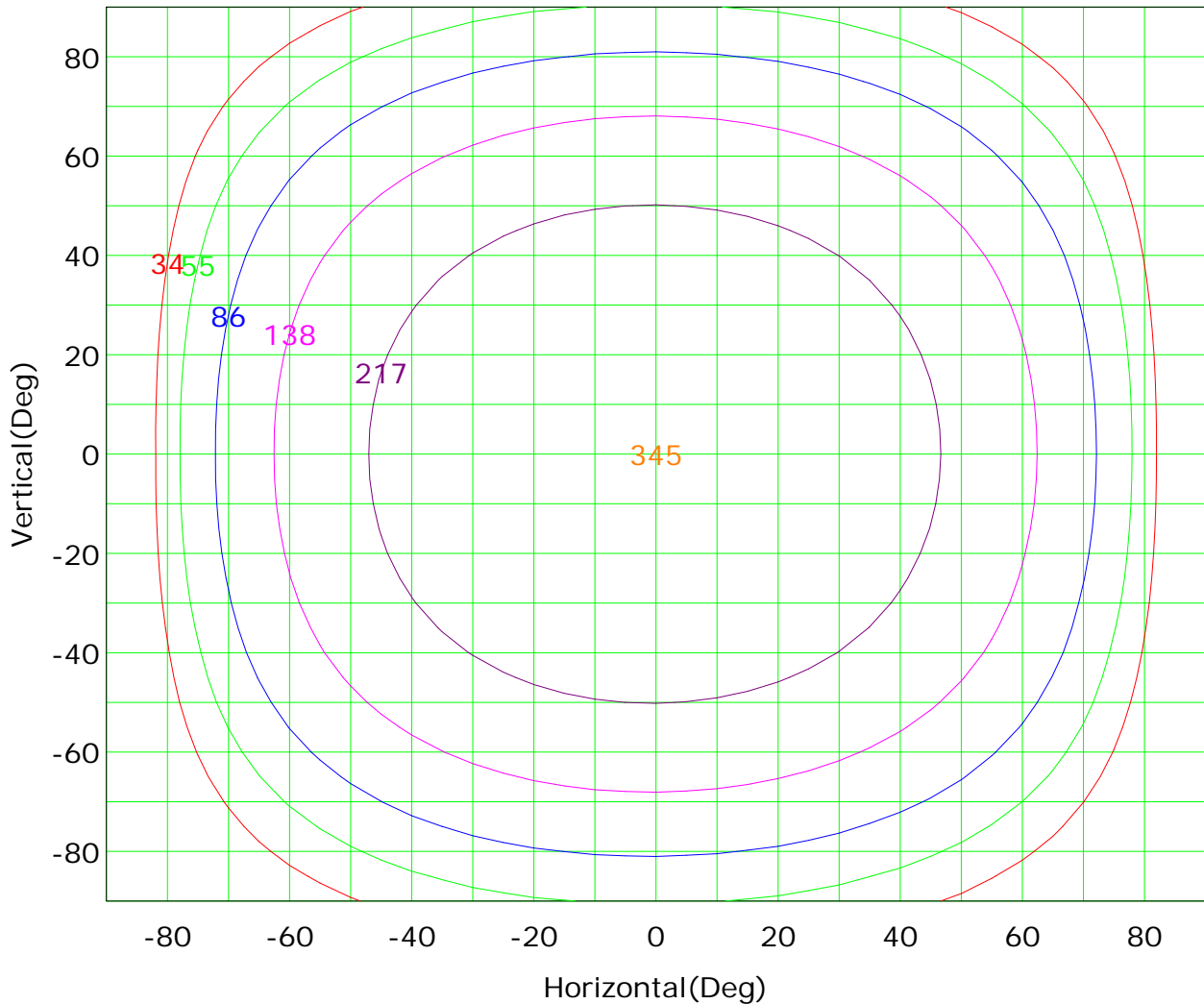


C Plane (°):0.0-360.0: 10.0
 Test Lab:
 Test Type: TYPE C
 Temperature:
 Operator:

Gamma Plane (°):0.0-180.0:1.0
 Test Device: GPM-2000
 Distance: 7.970 m
 Humidity:
 Inspector:



Isocandela (rectangle)



Imax (100%): 345 cd

— (10%):	34 cd	— (16%):	55 cd
— (25%):	86 cd	— (40%):	138 cd
— (63%):	217 cd	— (100%):	345 cd

C Plane (°):0.0-360.0: 10.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

Test Device: GPM-2000

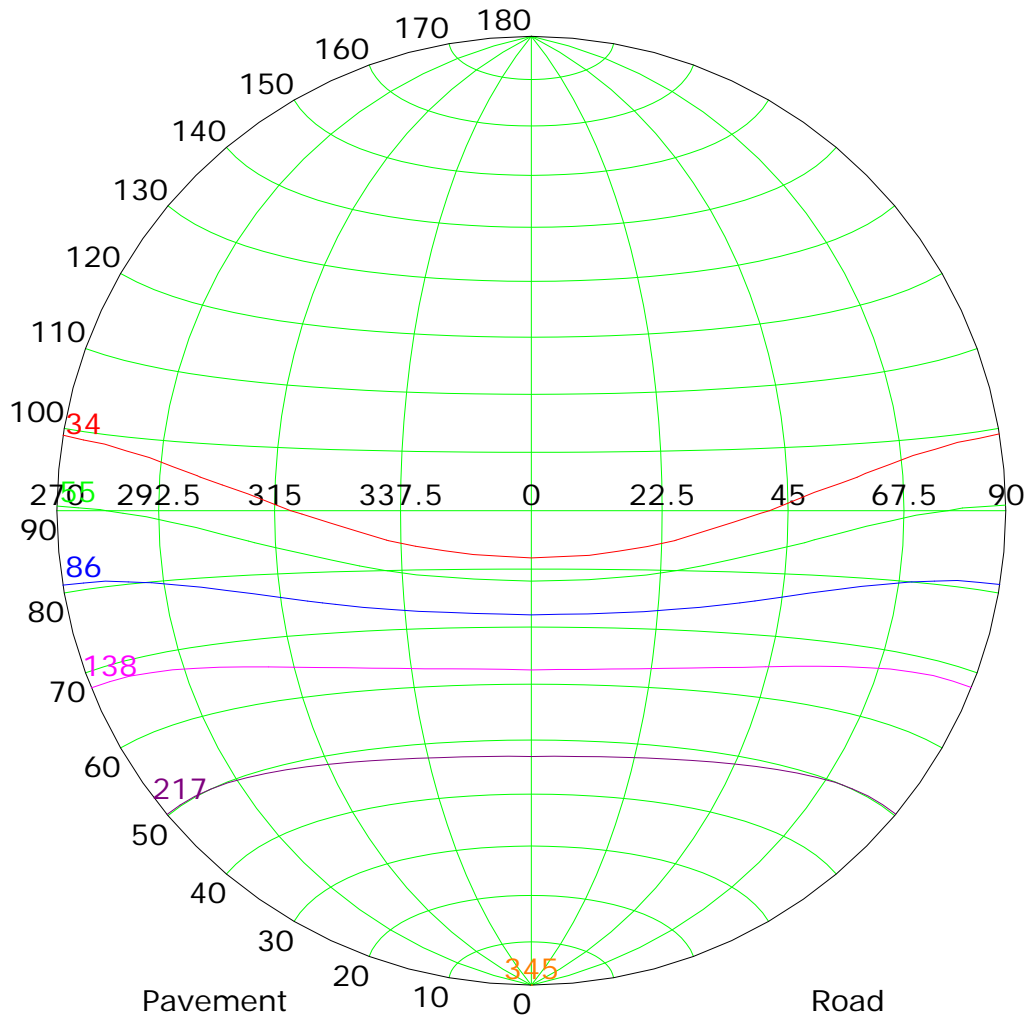
Distance: 7.970 m

Humidity:

Inspector:



Isocandela (sphere)



Imax (100%): 345 cd

— (10%):	34 cd	— (16%):	55 cd
— (25%):	86 cd	— (40%):	138 cd
— (63%):	217 cd	— (100%):	345 cd

C Plane (°):0.0-360.0: 10.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

Test Device: GPM-2000

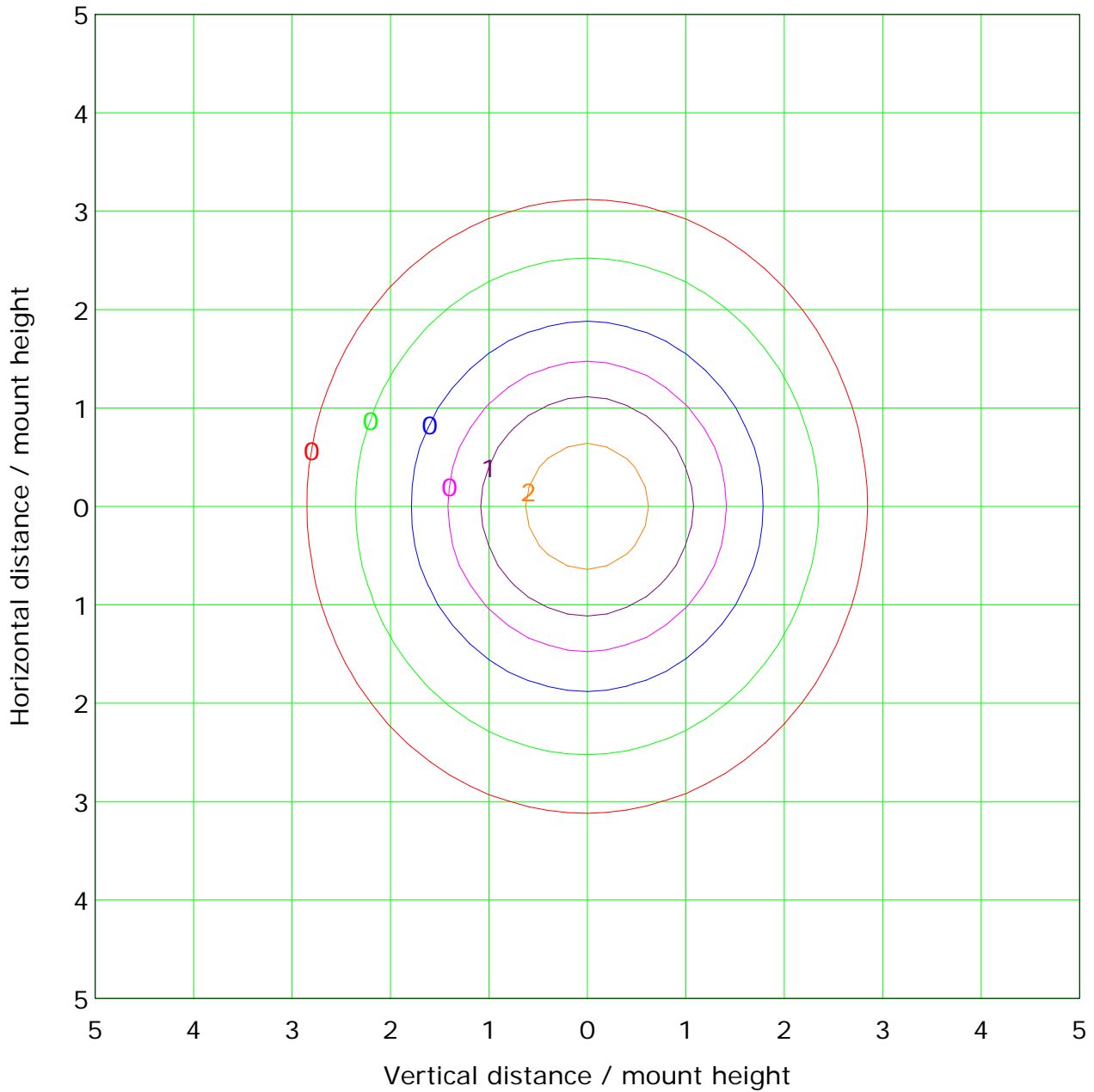
Distance: 7.970 m

Humidity:

Inspector:



IsoLux Plot



Mounting Height: 10.0m		Max Lux(100%): 3.4 lx	
— (1%):	0.0 lx	— (2%):	0.1 lx
— (5%):	0.2 lx	— (10%):	0.3 lx
— (20%):	0.7 lx	— (50%):	1.7 lx
— (100%):	3.4 lx		

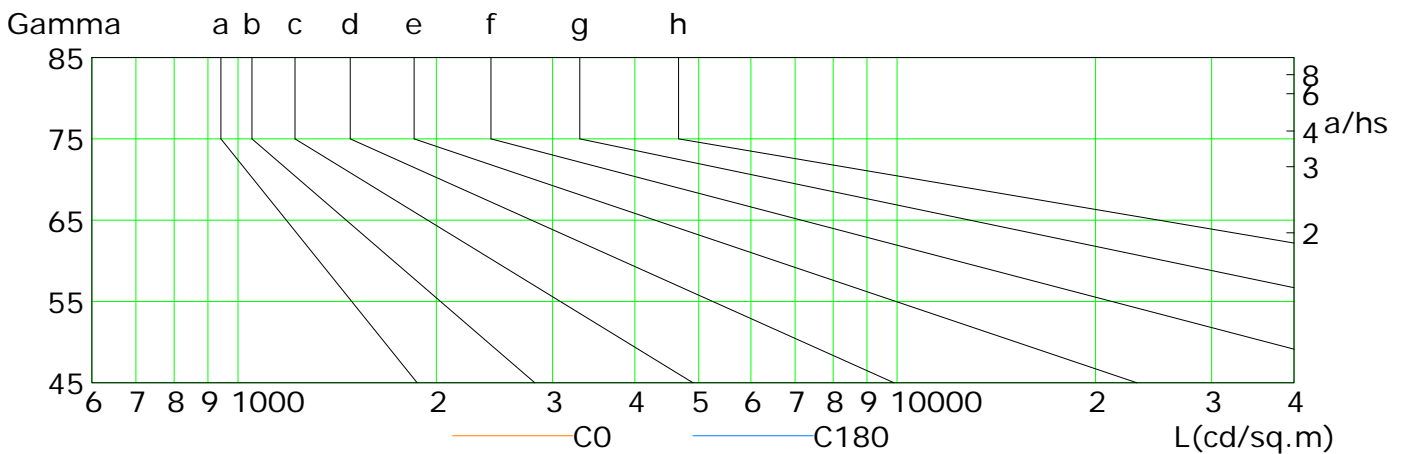
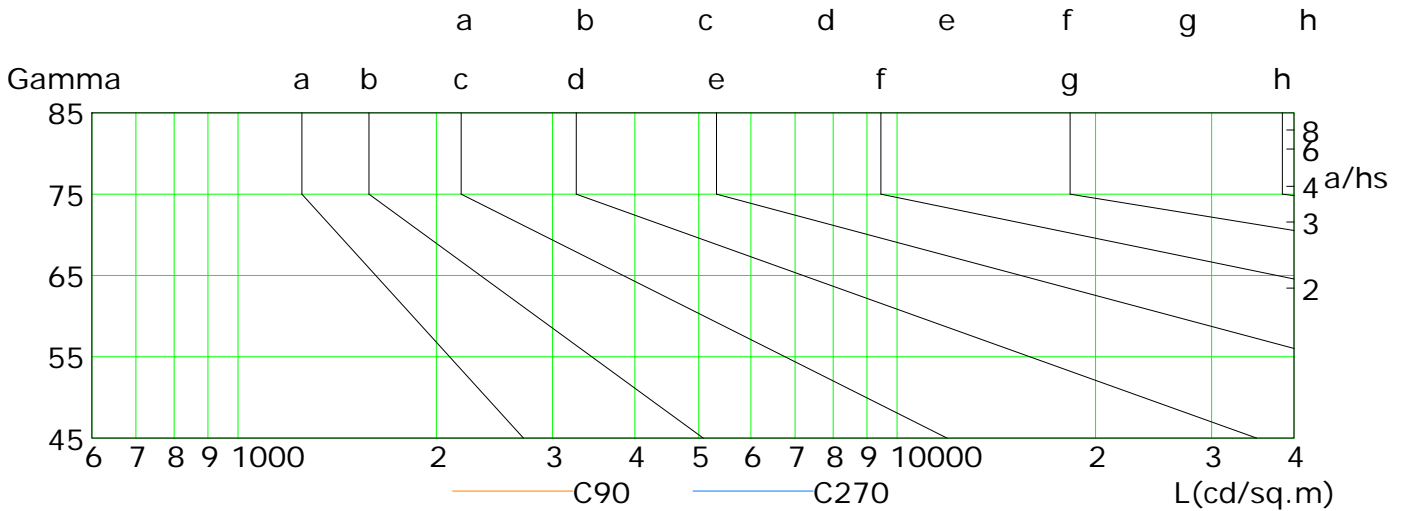
C Plane (°):0.0-360.0: 10.0
 Test Lab:
 Test Type: TYPE C
 Temperature:
 Operator:

Gamma Plane (°):0.0-180.0:1.0
 Test Device: GPM-2000
 Distance: 7.970 m
 Humidity:
 Inspector:



Lum Limit Curve

Dazzle	Quality	Illuminance (lx)							
		a	b	c	d	e	f	g	h
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



L(cd/sq.m)	G45	G50	G55	G60	G65	G70	G75	G80	G85
C0	227	203	177	151	125	98	71	44	19
C90	240	218	196	173	151	130	109	90	72
C180	225	201	176	151	124	98	71	44	19
C270	240	218	196	173	151	130	109	90	72

C Plane (°):0.0-360.0: 10.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

Test Device: GPM-2000

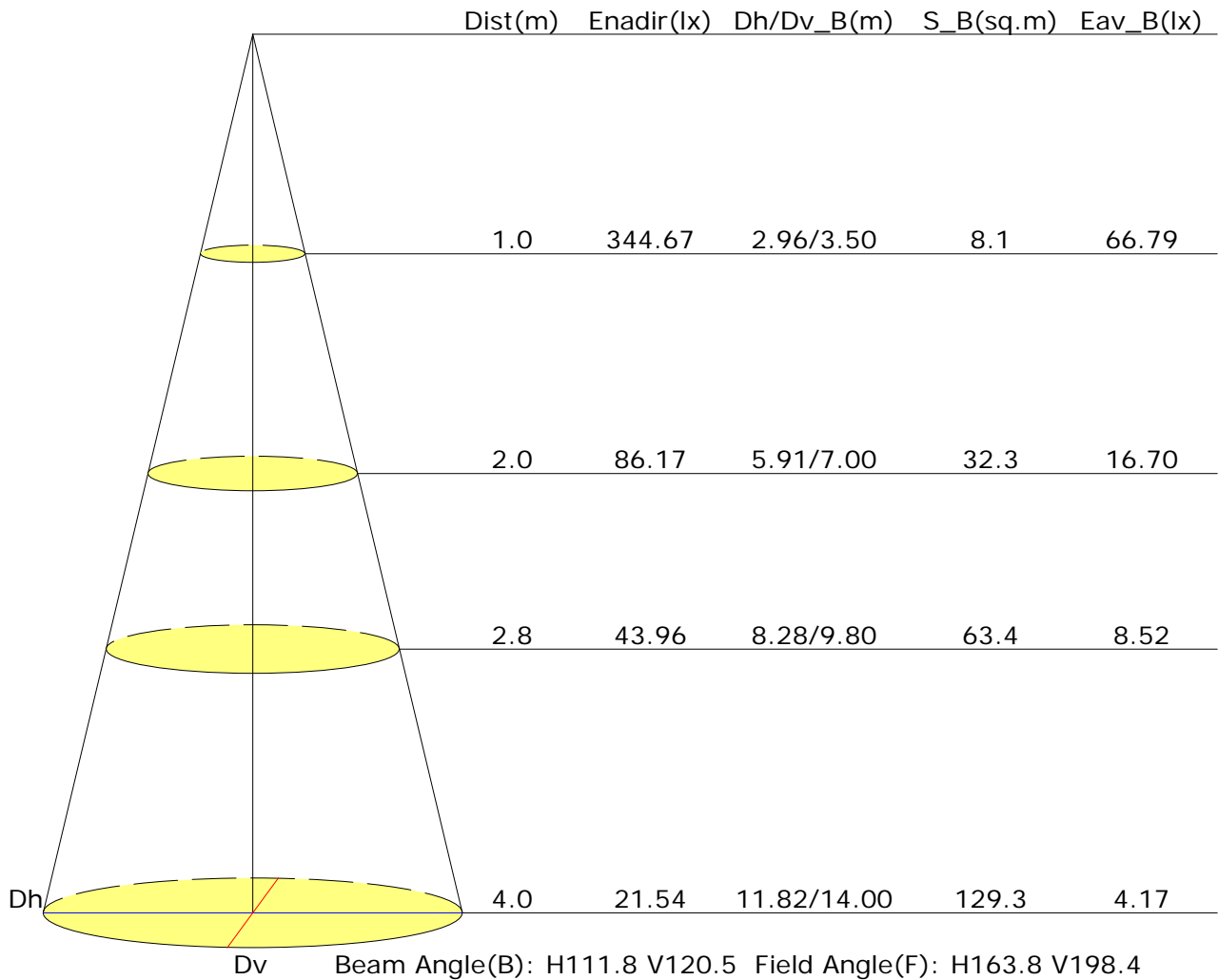
Distance: 7.970 m

Humidity:

Inspector:

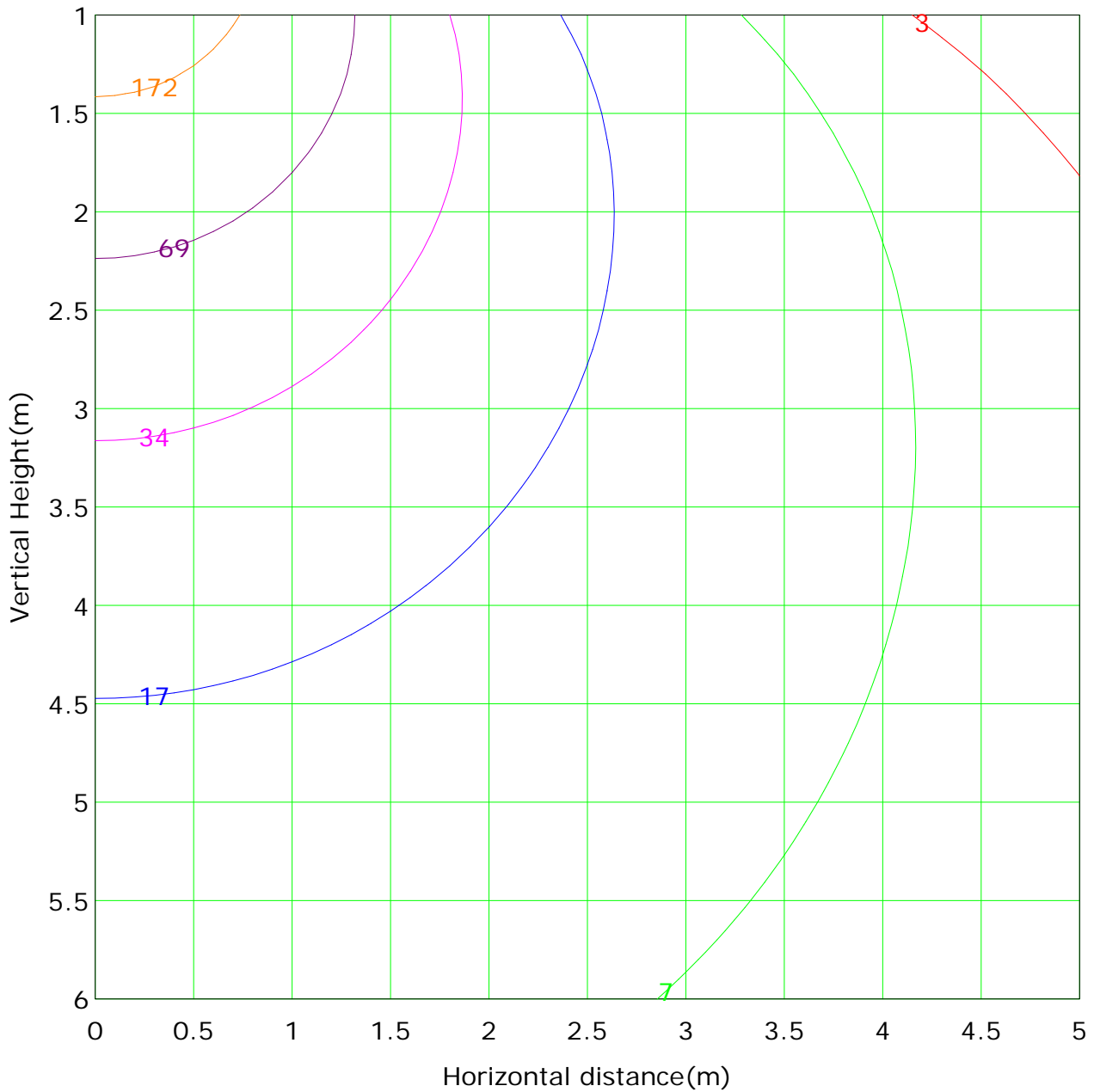


Illuminance at a Distance





Vertical IsoLux Plot



Lowest(m): 1.0m	Highest(m): 6.0m	Max Lux: 344.7 lx
— (1%): 3.4 lx	— (2%): 6.9 lx	— (10%): 34.5 lx
— (5%): 17.2 lx	— (20%): 68.9 lx	— (50%): 172.3 lx
— (100%): 344.7 lx		

C Plane (°):0.0-360.0: 10.0
 Test Lab:
 Test Type: TYPE C
 Temperature:
 Operator:

Gamma Plane (°):0.0-180.0:1.0
 Test Device: GPM-2000
 Distance: 7.970 m
 Humidity:
 Inspector: