

Report No.:

Test Time: 31/01/2020 14:26

Luminaire Property

Luminaire Manufacturer: Lighting line

Luminaire Description: LLP-SH03-03 + LLD-03-FK

Lamp Description: F52-400-60822

Number of Lamps: 2

Lumens per Lamp: 1579 lm

Voltage: 24.0 V

Current: 1.178 A

Power: 28.28 W

Power Factor: 1.000

Photometric Results

CIE Class: General Diffuse

Measurement Flux: 2148.2 lm

Downward Ratio: 34.01%

Total Rated Lamp Lumens: 3158.0 lm

Efficiency: 68.02%

Upward Ratio: 34.01%

Field Angle(C0/C180,C90/C270,C45/C225,C135/315): 360.0, 360.0, 360.0, 360.0

Beam Angle(C0/C180,C90/C270,C45/C225,C135/315): 360.0, 360.0, 360.0, 360.0

Luminaire Efficacy Rating (LER): 76.01

Central Intensity: 559.3 cd

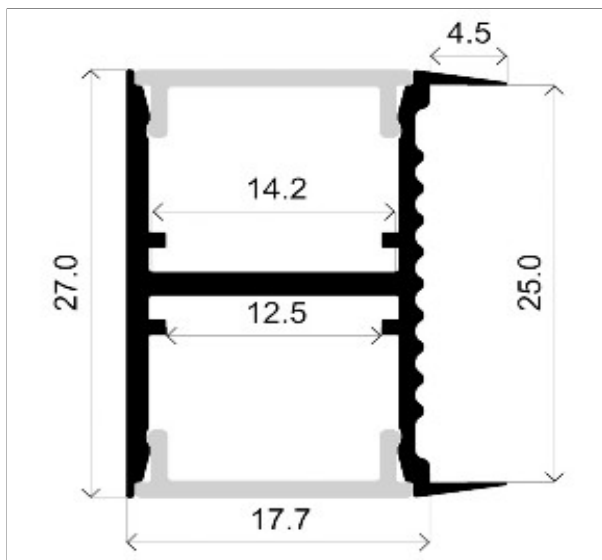
Max. Intensity: 570.7 cd

Pos of Max. Intensity: H80 V15

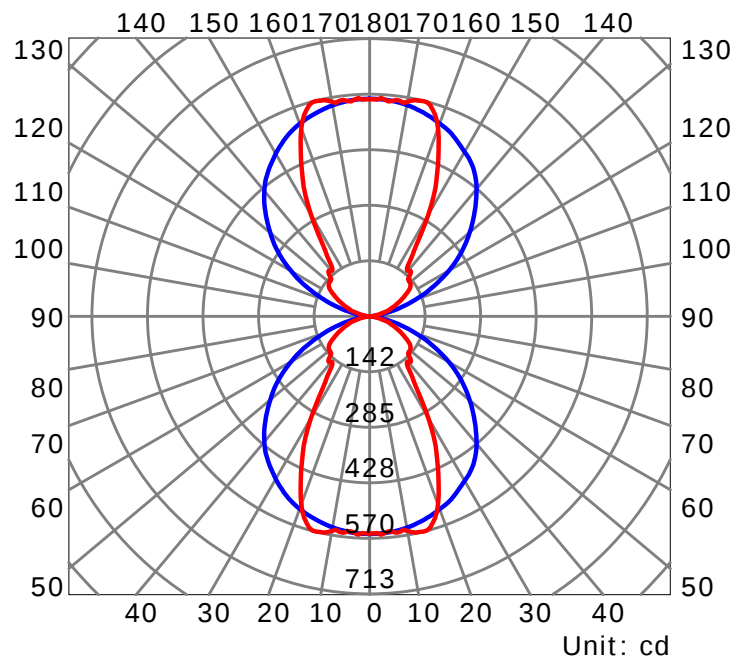
S/MH(C0/C180): 1.29

S/MH(C90/C270): 0.99

Picture Of Luminaire



Luminous Intensity Distribution Curve



— C0-C180 — C90-C270

C Plane (°):0.0-180.0: 10.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

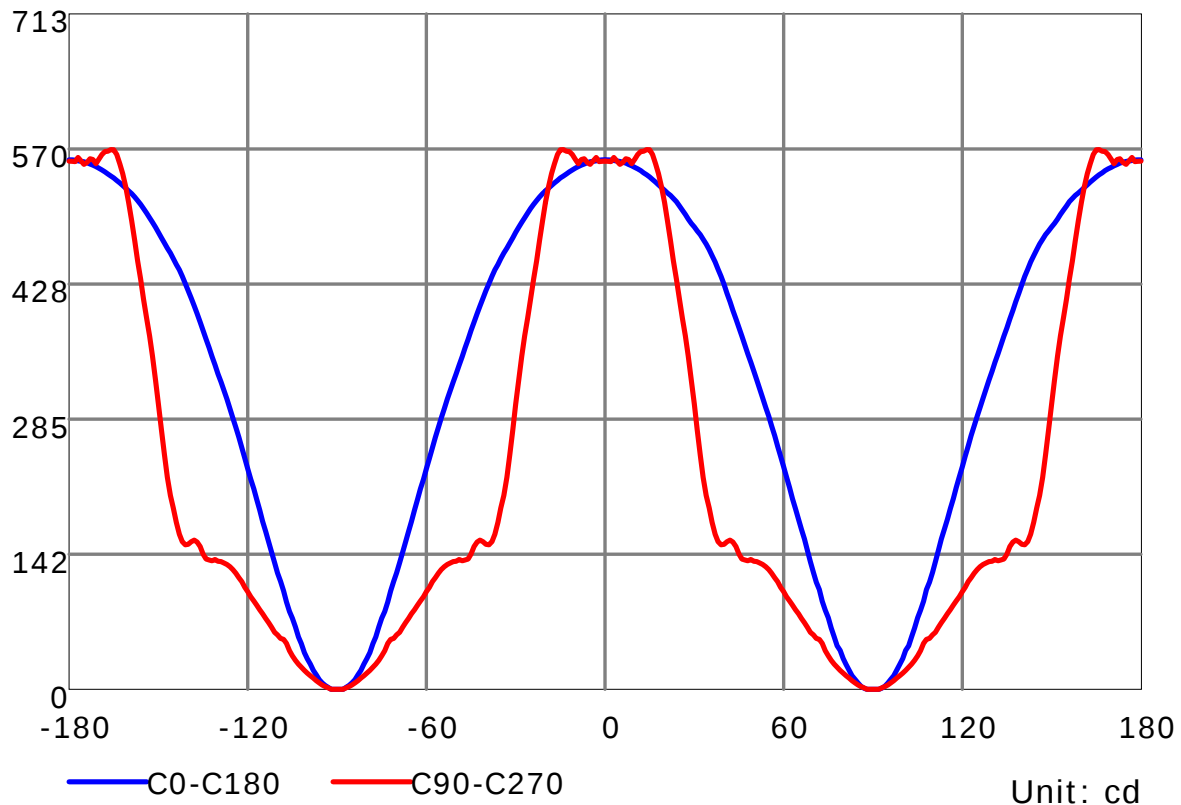
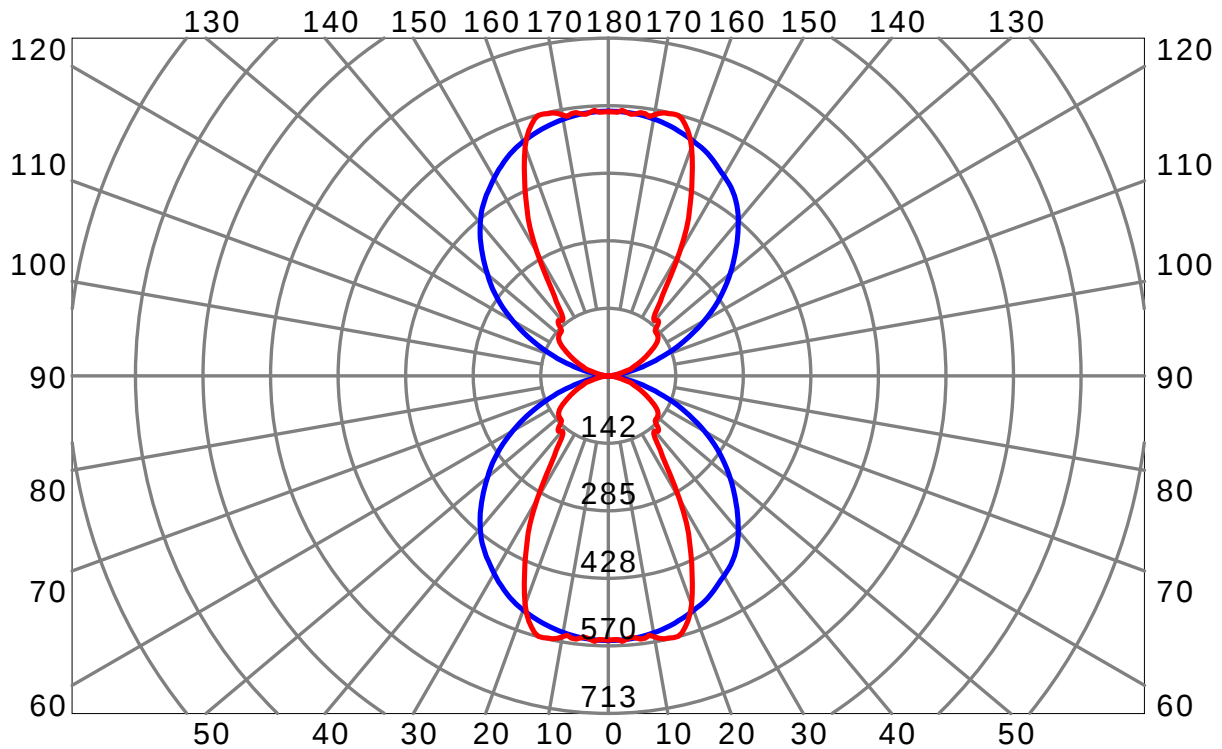
Test Device: GPM-2000

Distance: 7.970 m

Humidity:

Inspector:

Luminous Intensity Distribution Curve



C Plane (°):0.0-180.0: 10.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

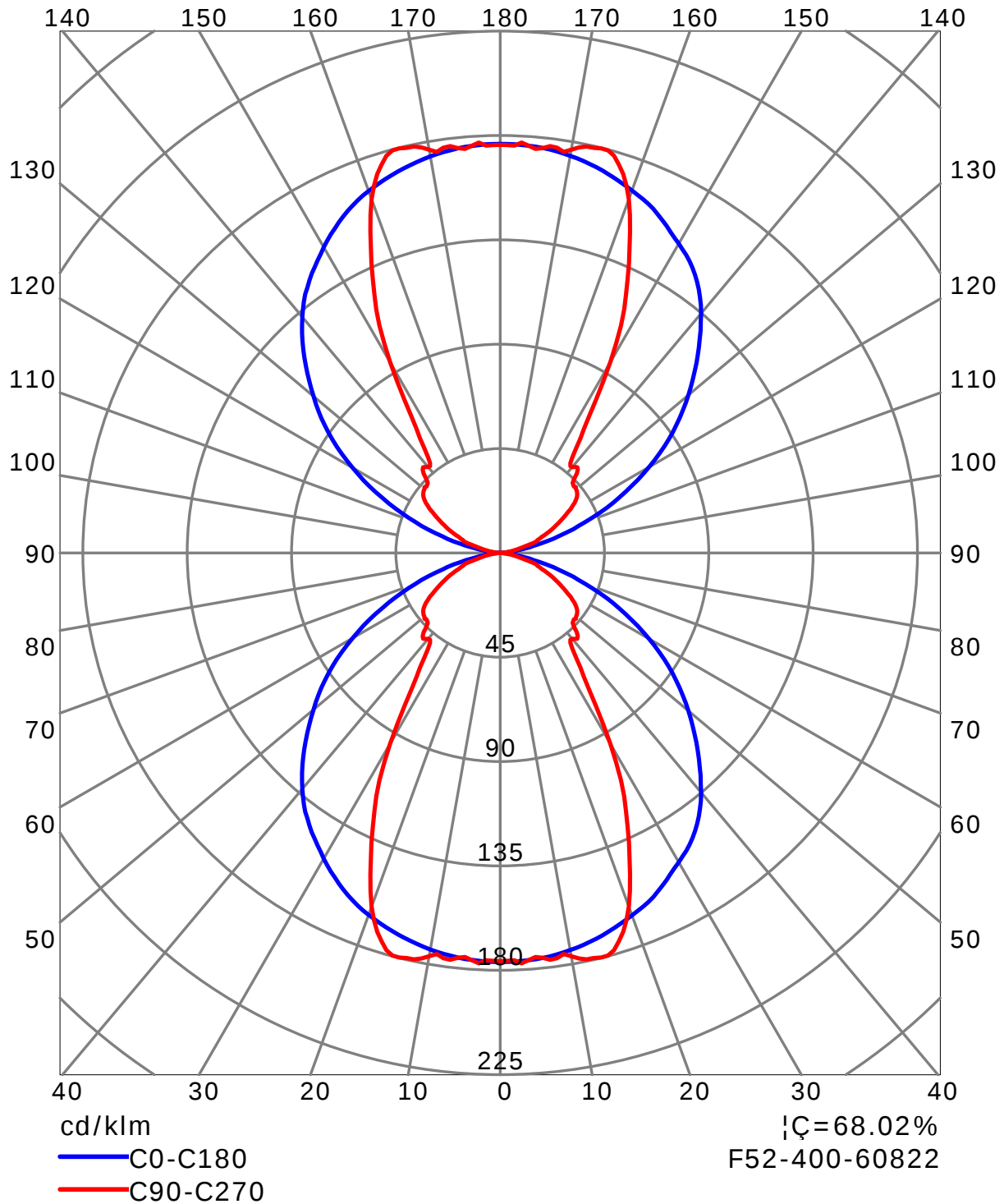
Test Device: GPM-2000

Distance: 7.970 m

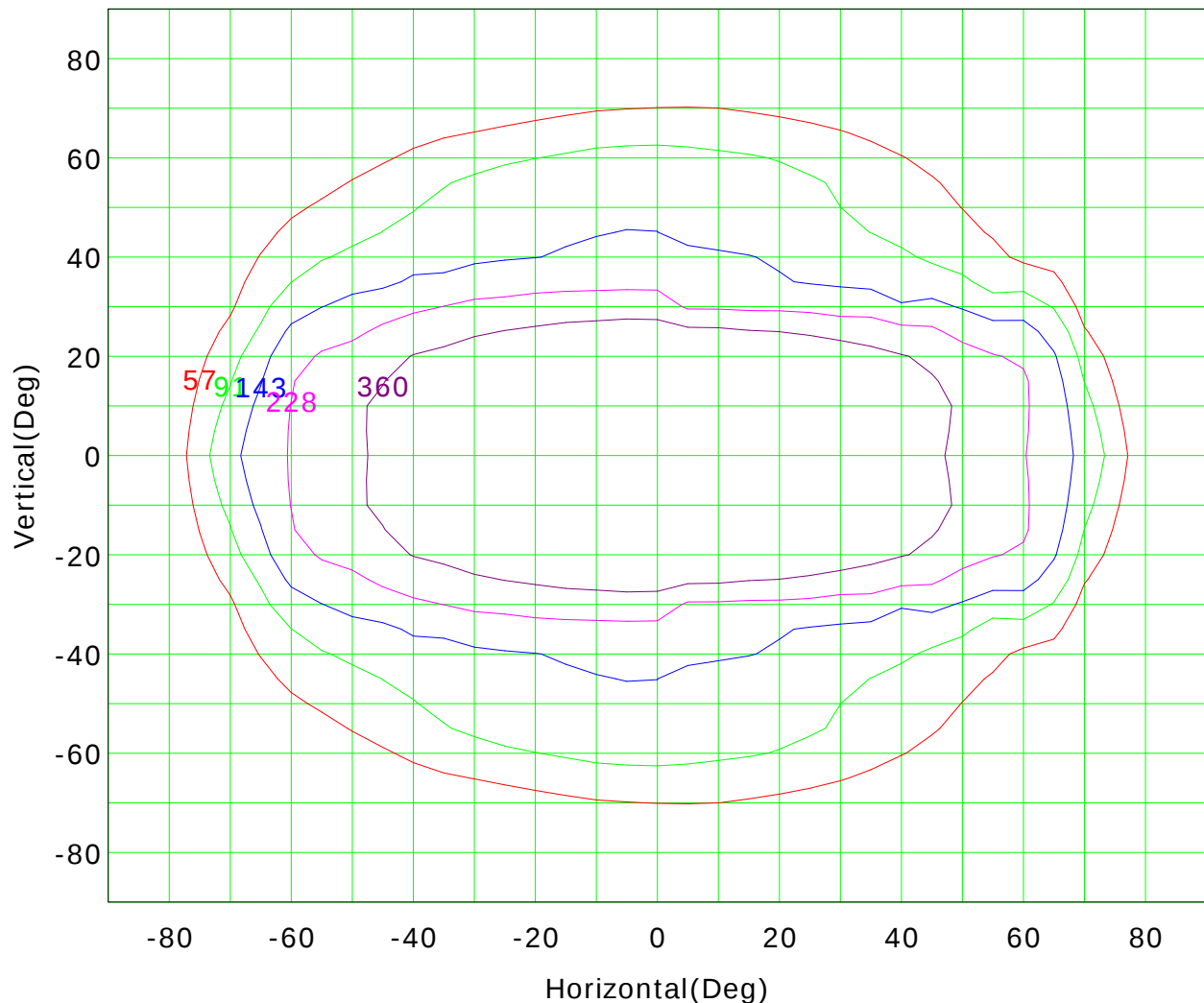
Humidity:

Inspector:

Luminous Intensity Distribution Curve(cd / klm)



Isocandela (rectangle)



I_{max} (100%): 571 cd

(10%):	57 cd	(16%):	91 cd
(25%):	143 cd	(40%):	228 cd
(63%):	360 cd	(100%):	571 cd

C Plane (°):0.0-180.0: 10.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

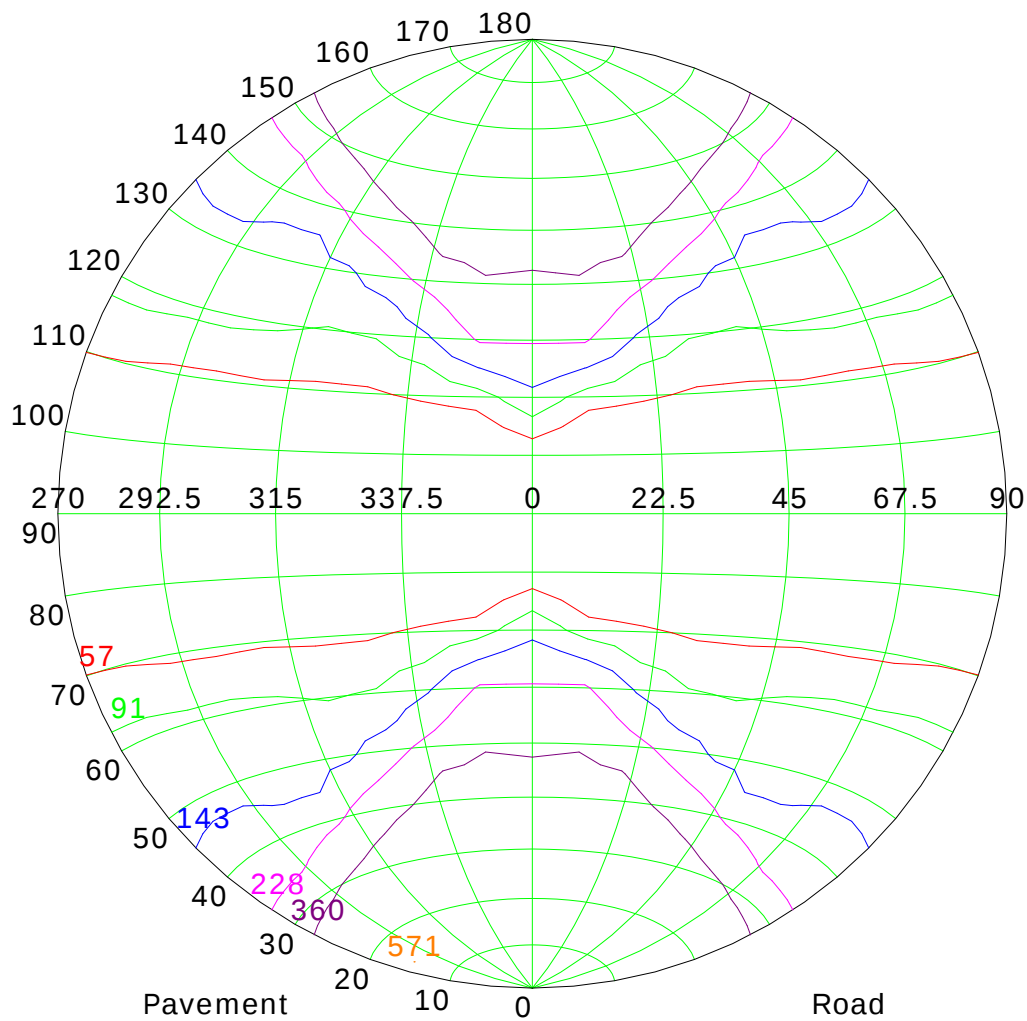
Test Device: GPM-2000

Distance: 7.970 m

Humidity:

Inspector:

Isocandela (sphere)



Imax (100%): 571 cd

(10%):	57 cd	(16%):	91 cd
(25%):	143 cd	(40%):	228 cd
(63%):	360 cd	(100%):	571 cd

C Plane (°):0.0-180.0: 10.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

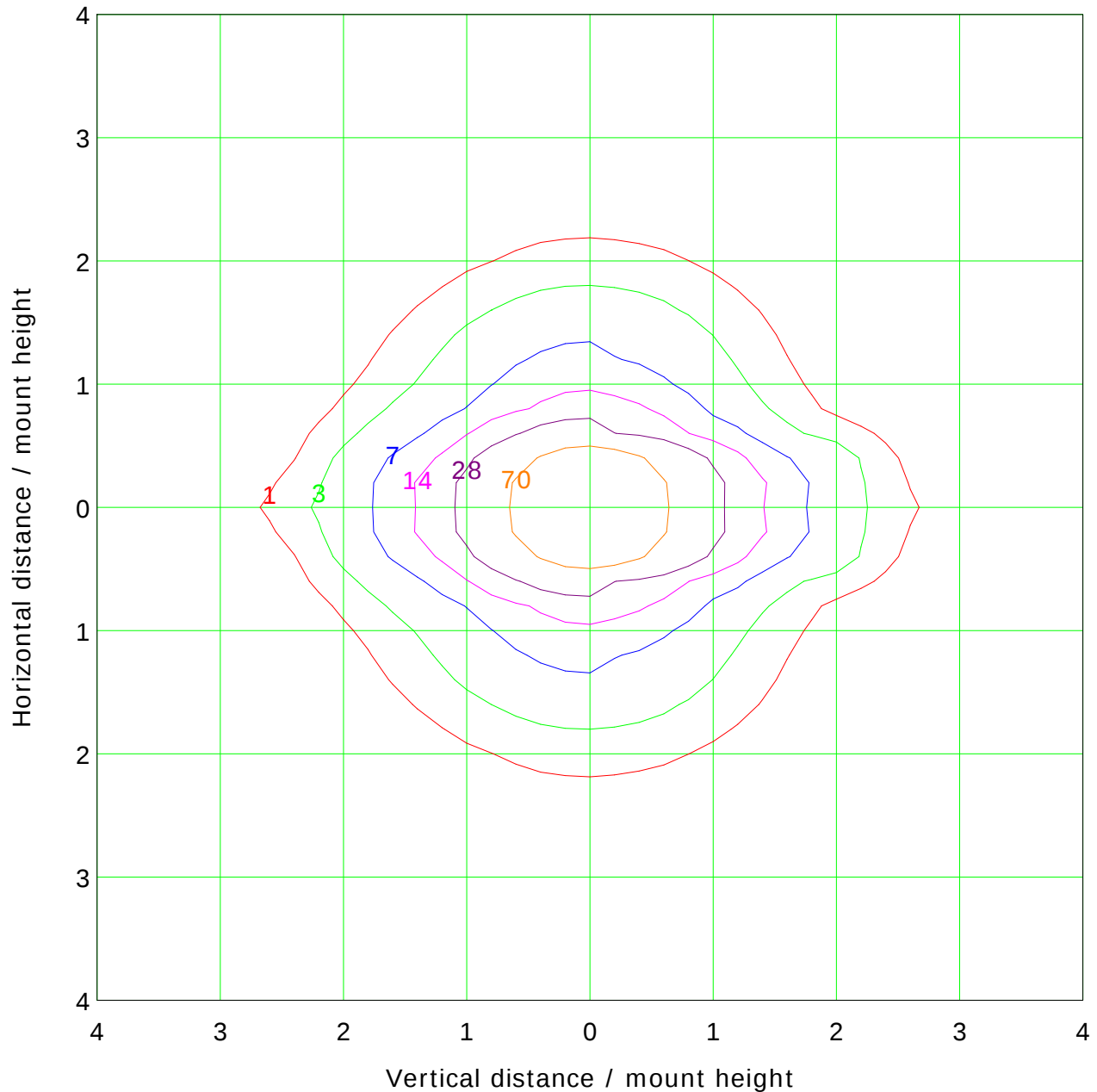
Test Device: GPM-2000

Distance: 7.970 m

Humidity:

Inspector:

IsoLux Plot



Mounting Height: 2.0m		Max Lux(100%): 140.4 lx	
— (1%):	1.4 lx	— (2%):	2.8 lx
— (5%):	7.0 lx	— (10%):	14.0 lx
— (20%):	28.1 lx	— (50%):	70.2 lx
— (100%):	140.4 lx		

C Plane (°):0.0-180.0: 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

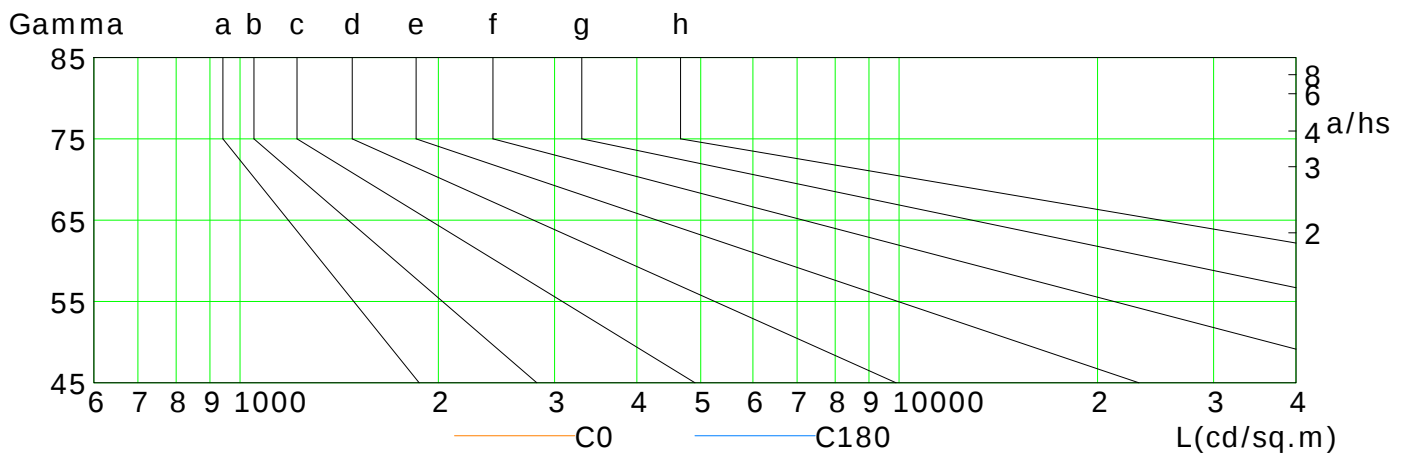
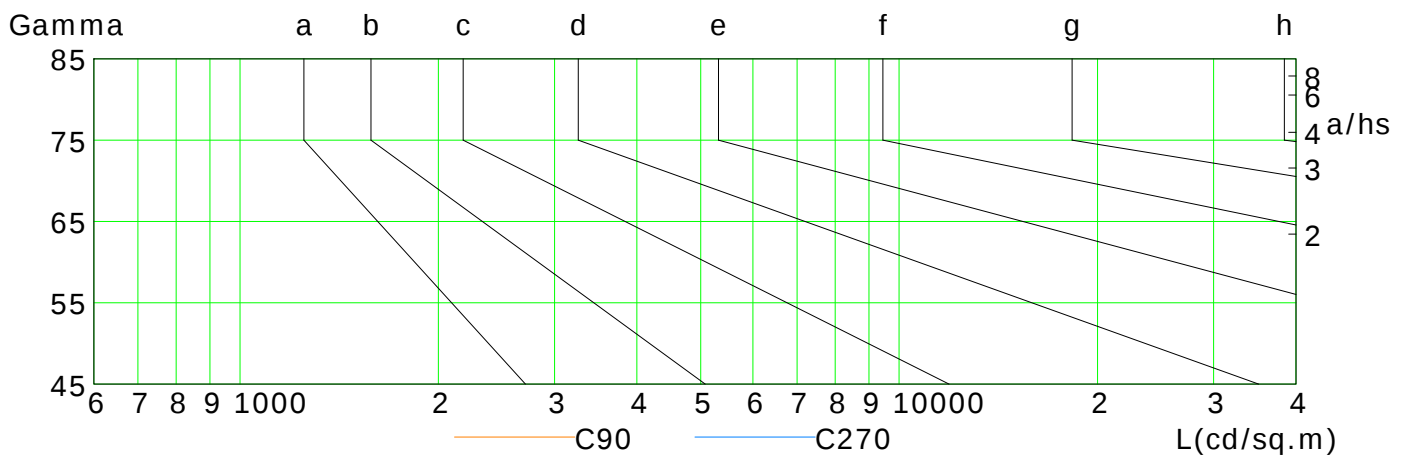
Humidity:

Inspector:

Lum Limit Curve

Dazzle	Quality	Illuminance (lx)							
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	382	336	288	235	180	123	76	33	7
C90	143	135	127	103	80	58	35	17	5
C180	379	333	287	233	177	123	75	32	7
C270	143	135	127	103	80	58	35	17	5

C Plane (°):0.0-180.0: 10.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

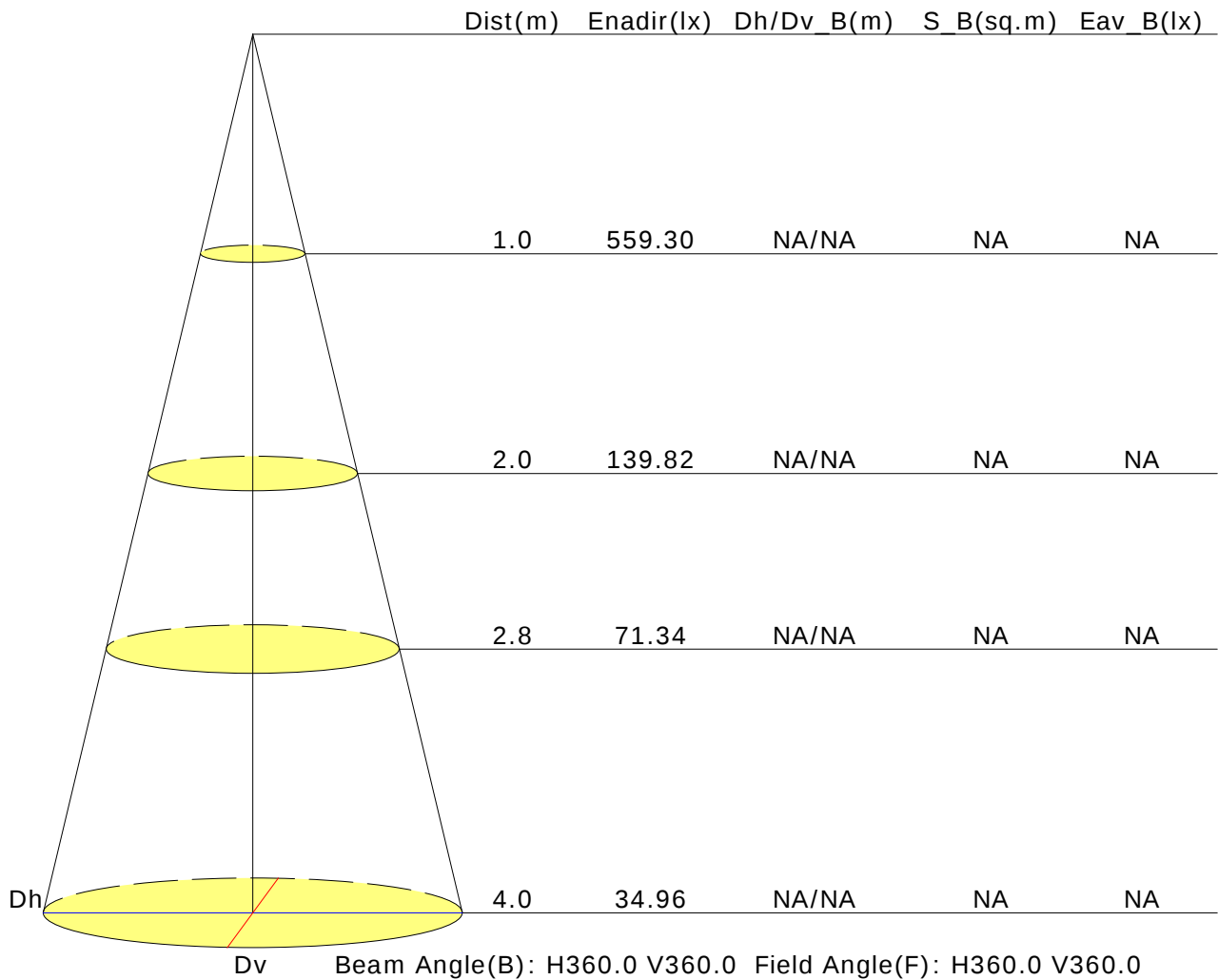
Test Device: GPM-2000

Distance: 7.970 m

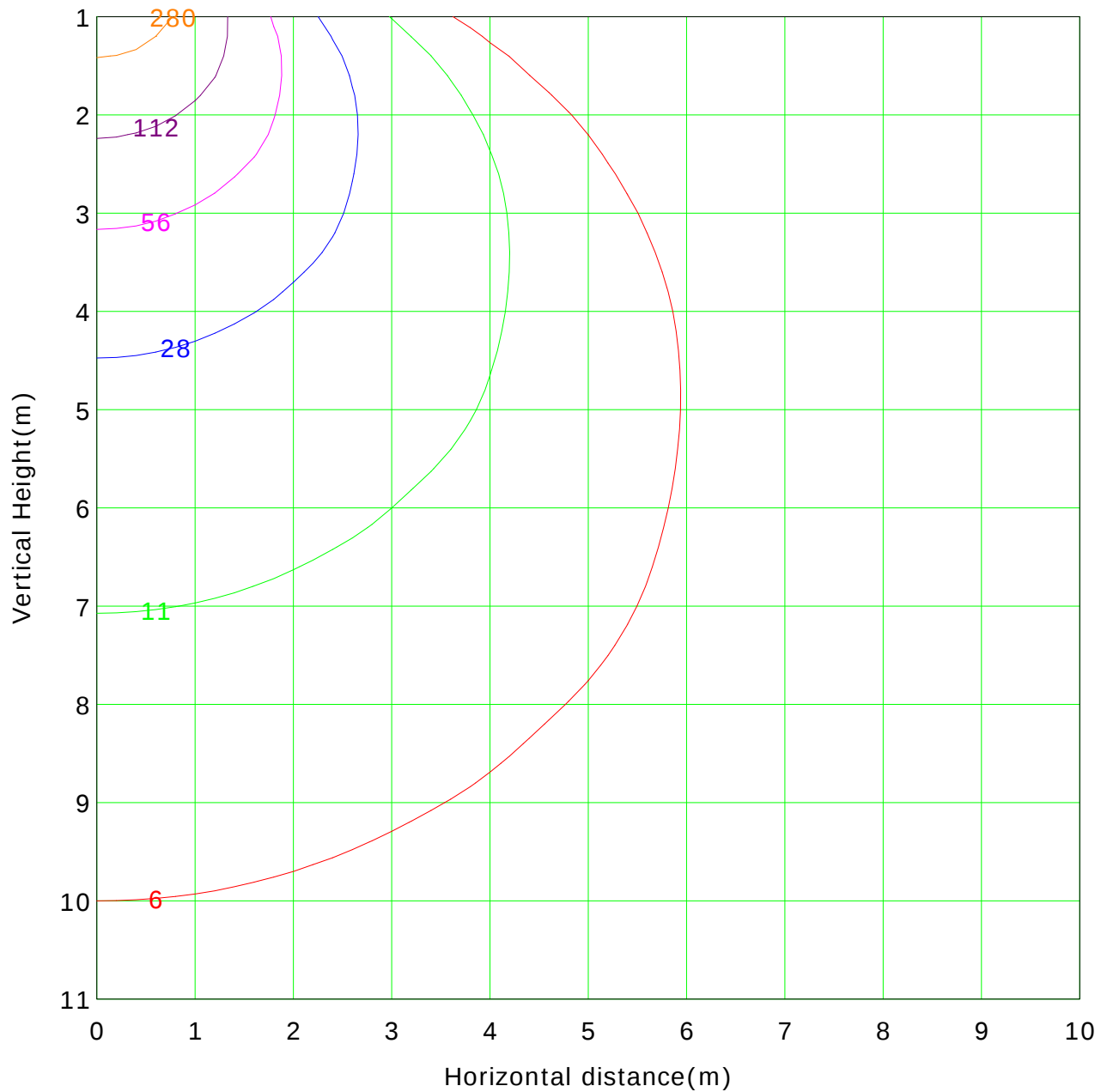
Humidity:

Inspector:

Illuminance at a Distance



Vertical IsoLux Plot



Lowest(m): 1.0m Highest(m): 11.0m Max Lux: 559.3 lx

— (1%): 5.6 lx	— (2%): 11.2 lx
— (5%): 28.0 lx	— (10%): 55.9 lx
— (20%): 111.9 lx	— (50%): 279.6 lx
— (100%): 559.3 lx	

Report No.:

Test Time: 31/01/2020 12:36

Luminaire Property

Luminaire Manufacturer: Lighting line

Luminaire Description: LLP-SH03-03 + LLD-03-FH

Lamp Description: F52-400-60822

Number of Lamps: 2

Lumens per Lamp: 1579 lm

Voltage: 24.0 V

Current: 1.180

Power: 28.30 W

Power Factor: 1.000

Photometric Results

CIE Class: General Diffuse

Measurement Flux: 2030.8 lm

Downward Ratio: 32.15%

Total Rated Lamp Lumens: 3158.0 lm

Efficiency: 64.31%

Upward Ratio: 32.15%

Field Angle(C0/C180,C90/C270,C45/C225,C135/315): 360.0, 360.0, 360.0, 360.0

Beam Angle(C0/C180,C90/C270,C45/C225,C135/315): 360.0, 360.0, 360.0, 360.0

Luminaire Efficacy Rating (LER): 71.81

Central Intensity: 522.3 cd

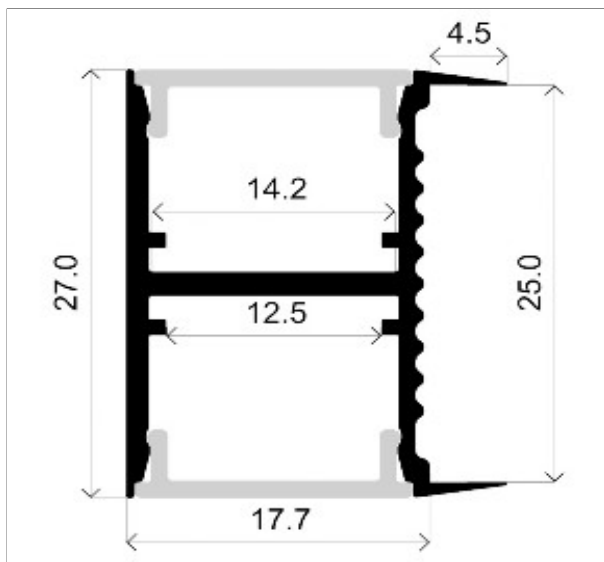
Max. Intensity: 522.3 cd

Pos of Max. Intensity: H0 V0

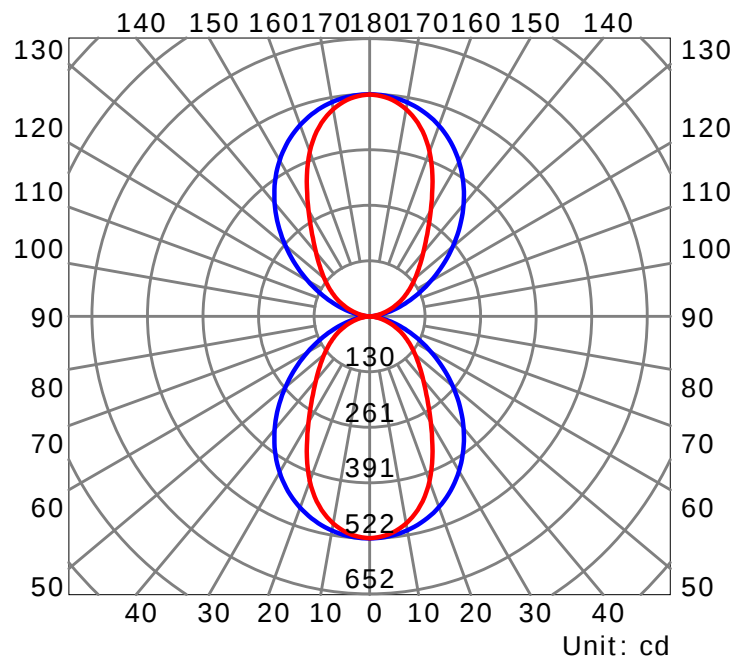
S/MH(C0/C180): 1.20

S/MH(C90/C270): 0.93

Picture Of Luminaire



Luminous Intensity Distribution Curve



— C0-C180 — C90-C270

C Plane (°):0.0-180.0: 10.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

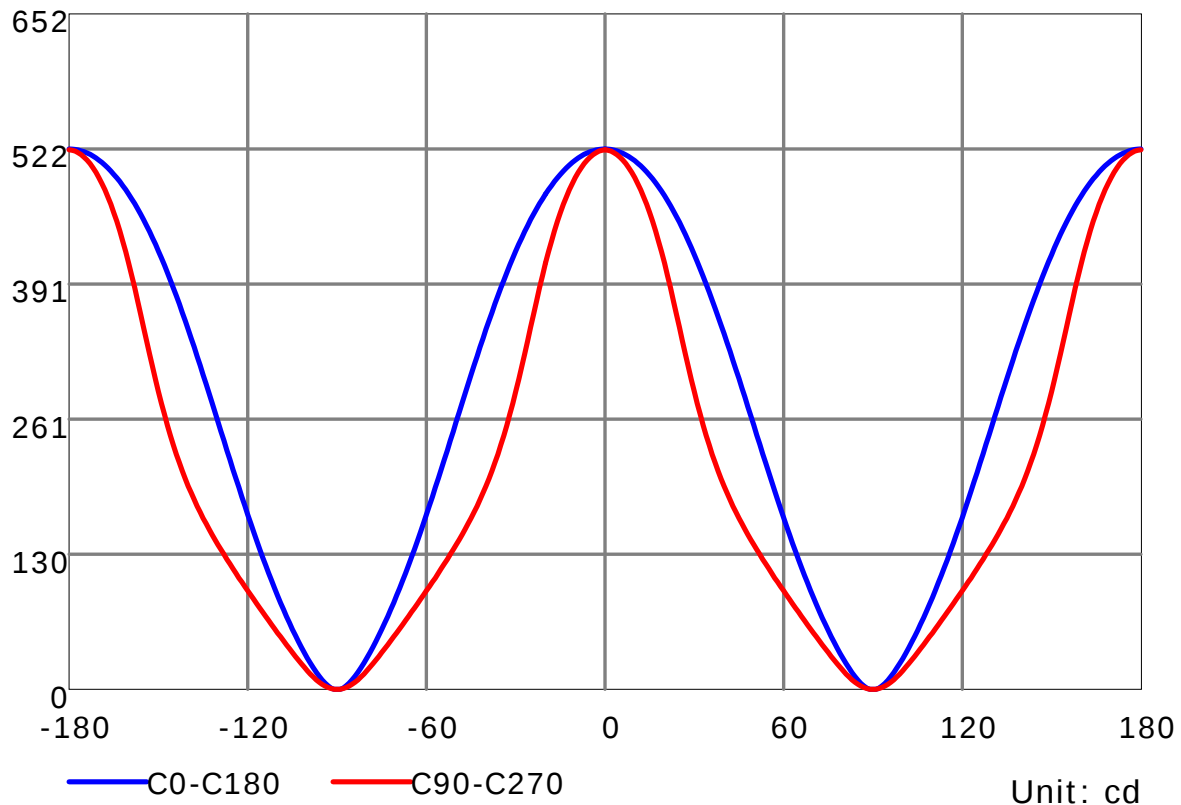
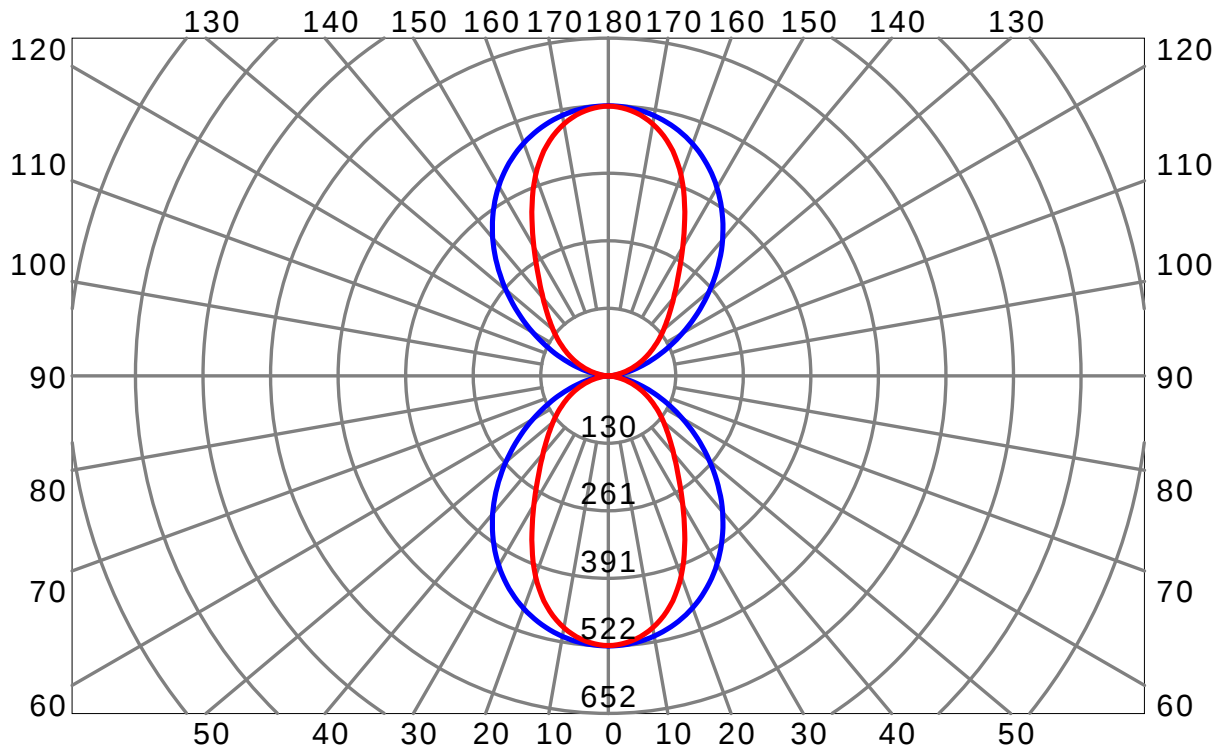
Test Device: GPM-2000

Distance: 7.970 m

Humidity:

Inspector:

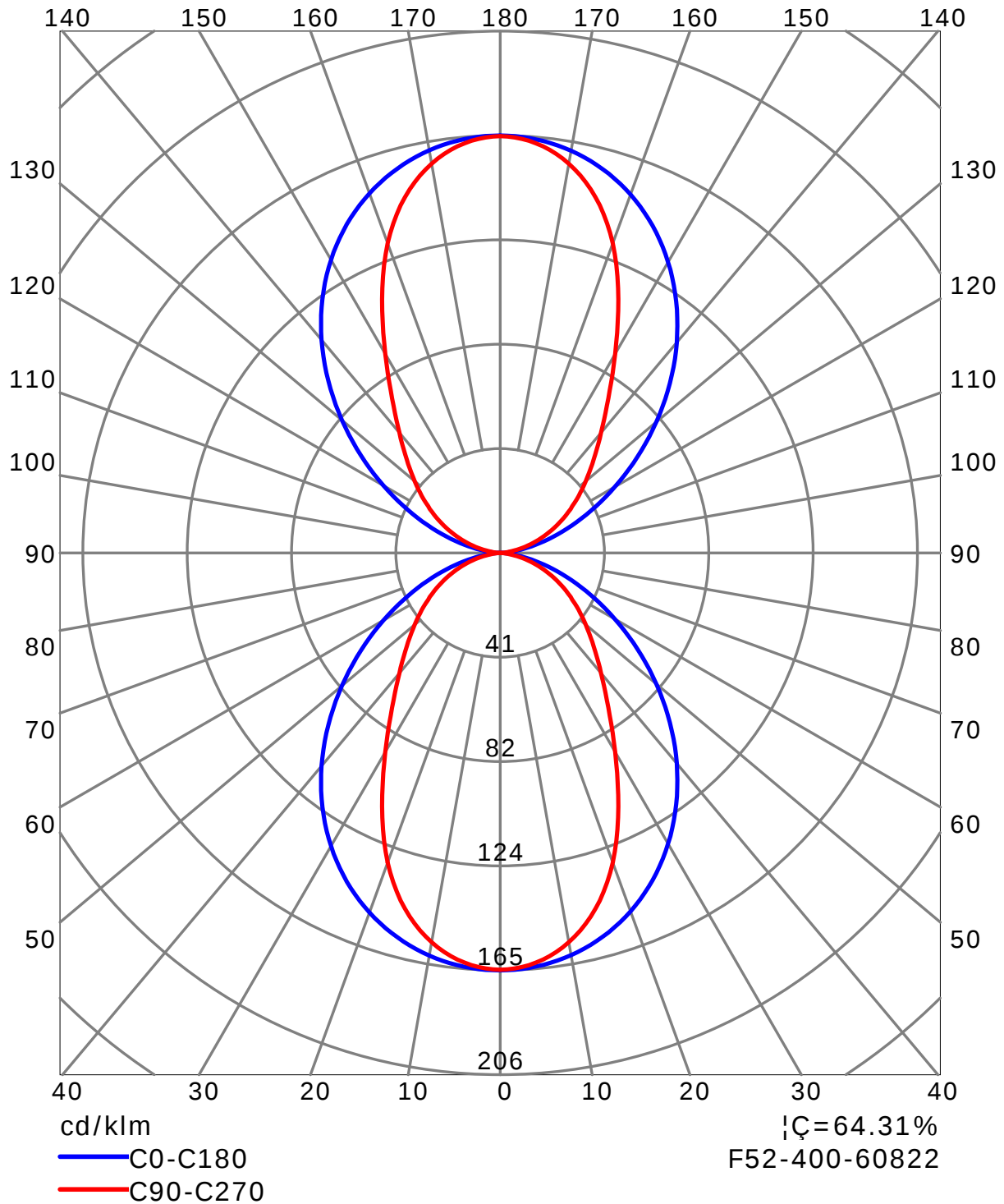
Luminous Intensity Distribution Curve



C Plane (°):0.0-180.0: 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:

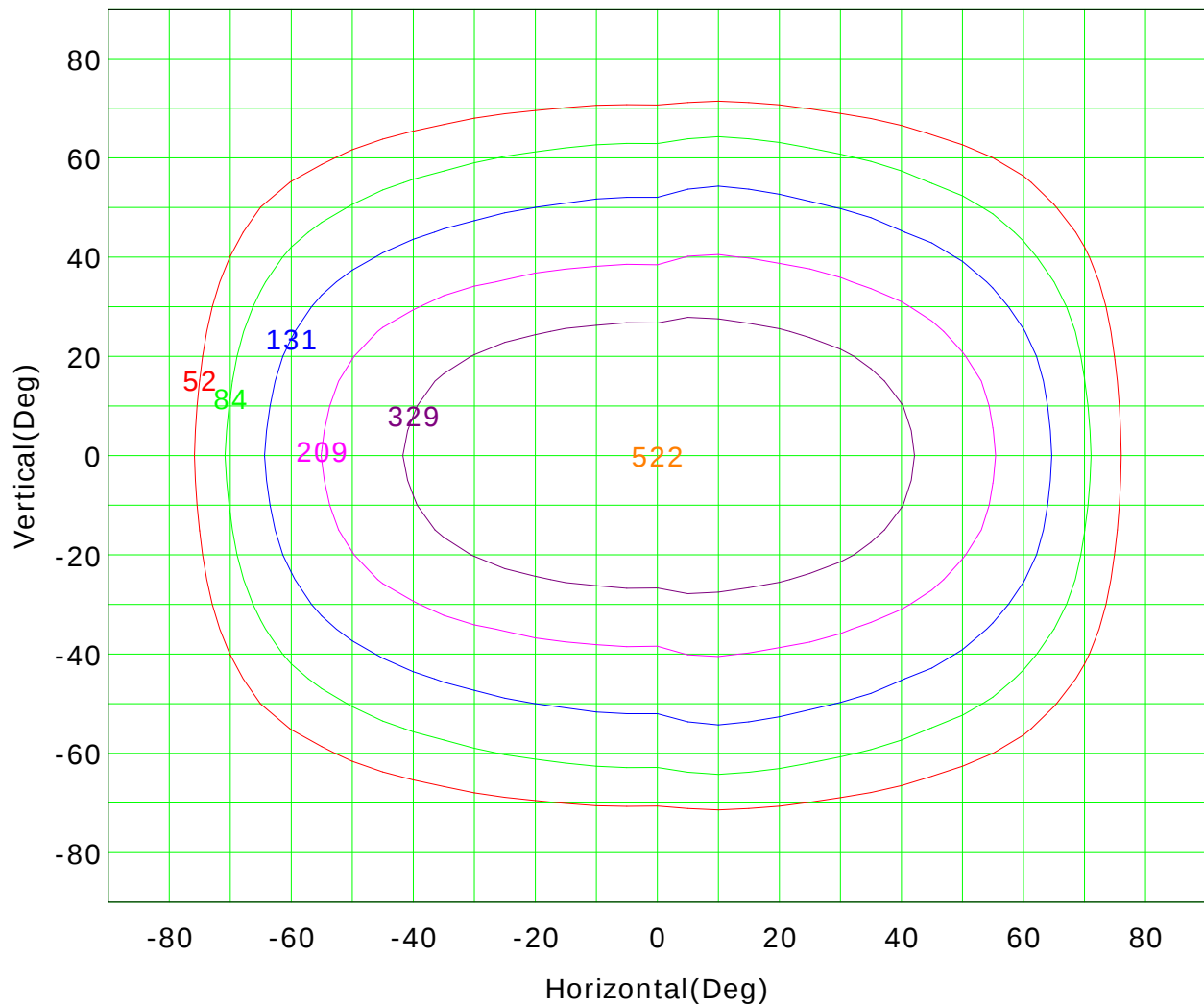
Luminous Intensity Distribution Curve(cd / klm)



C Plane (°):0.0-180.0: 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)



I_{max} (100%): 522 cd

(10%):	52 cd	(16%):	84 cd
(25%):	131 cd	(40%):	209 cd
(63%):	329 cd	(100%):	522 cd

C Plane (°):0.0-180.0: 10.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

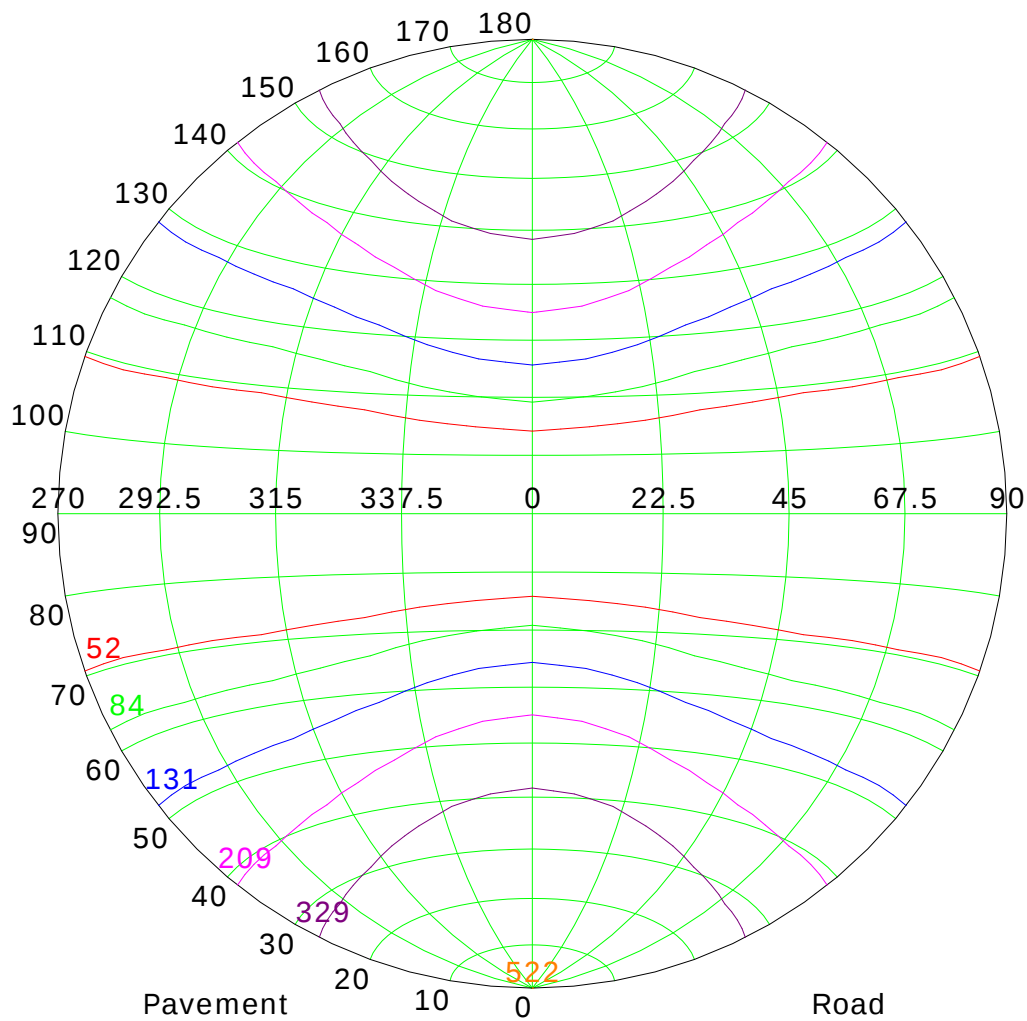
Test Device: GPM-2000

Distance: 7.970 m

Humidity:

Inspector:

Isocandela (sphere)



I_{max} (100%): 522 cd

(10%):	52 cd	(16%):	84 cd
(25%):	131 cd	(40%):	209 cd
(63%):	329 cd	(100%):	522 cd

C Plane (°):0.0-180.0: 10.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

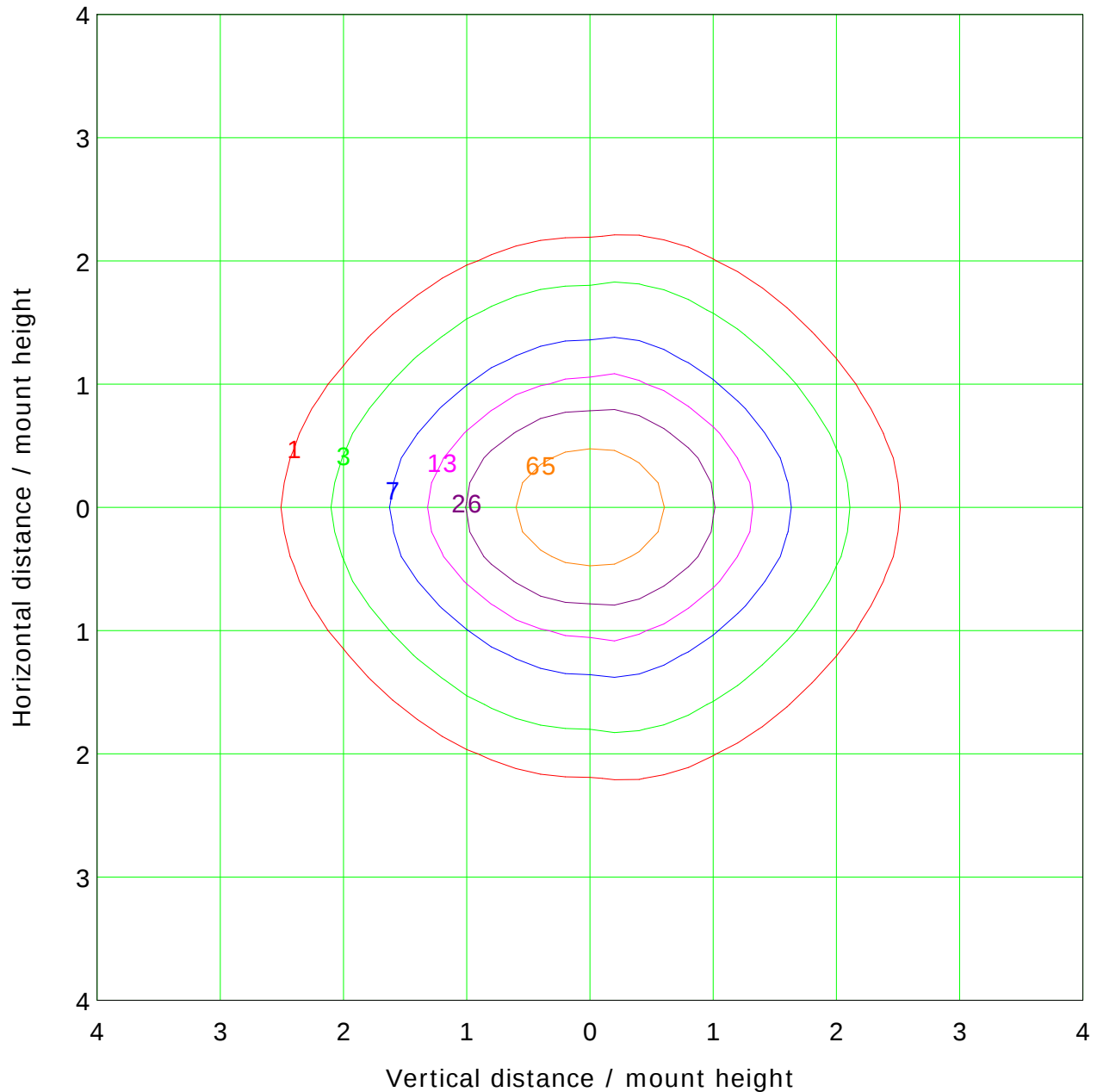
Test Device: GPM-2000

Distance: 7.970 m

Humidity:

Inspector:

IsoLux Plot



Mounting Height: 2.0m		Max Lux(100%): 130.6 lx	
— (1%):	1.3 lx	— (2%):	2.6 lx
— (5%):	6.5 lx	— (10%):	13.1 lx
— (20%):	26.1 lx	— (50%):	65.3 lx
— (100%):	130.6 lx		

C Plane (°):0.0-180.0: 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

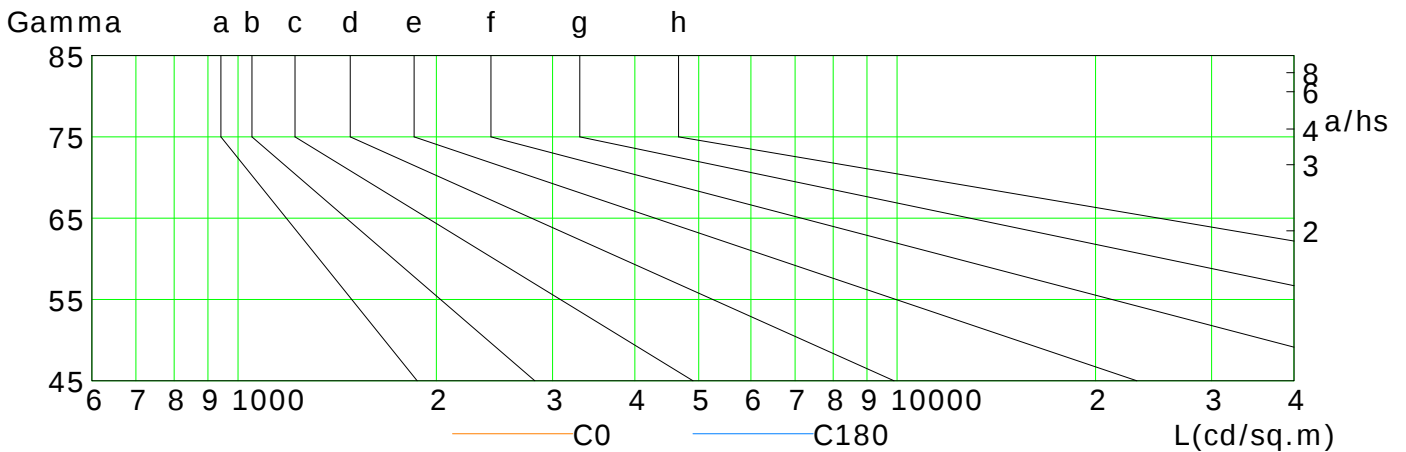
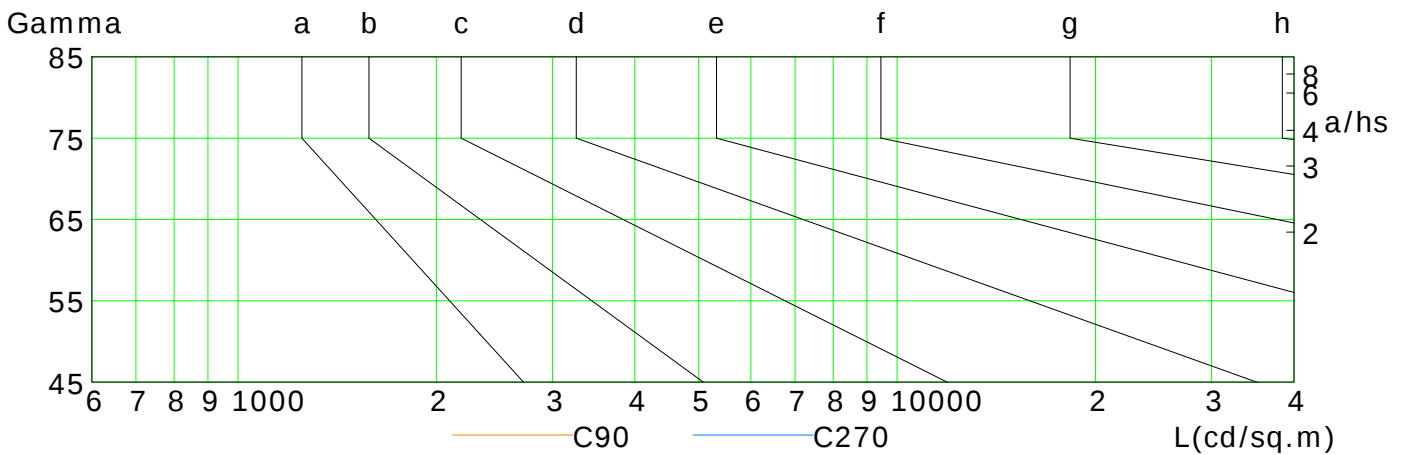
Humidity:

Inspector:

Lum Limit Curve

Dazzle	Quality	Illuminance (lx)							
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	300	255	210	166	125	89	57	30	9
C90	165	140	117	95	75	55	36	18	5
C180	304	259	213	169	128	91	58	30	9
C270	165	140	117	95	75	55	36	18	5

C Plane (°):0.0-180.0: 10.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

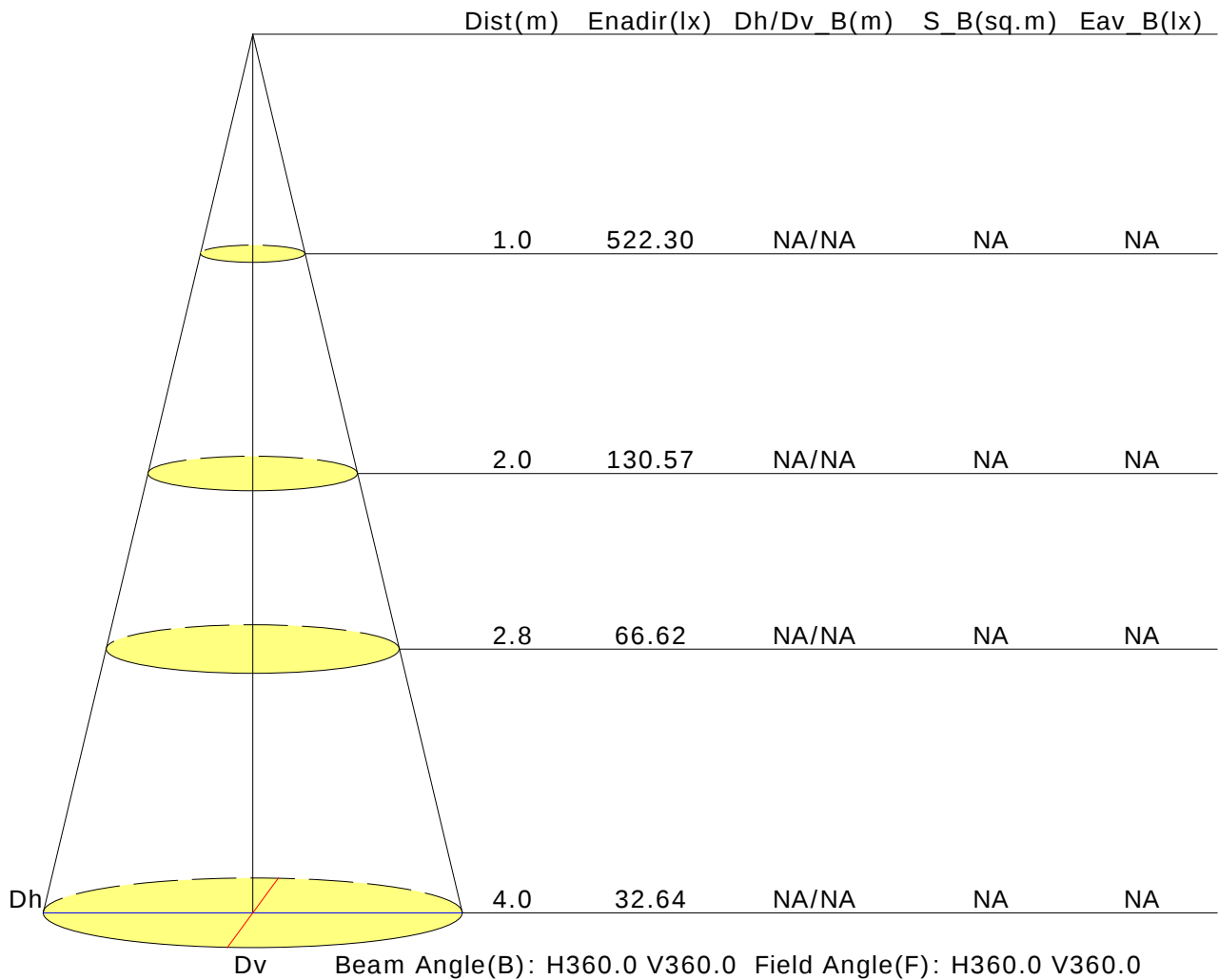
Test Device: GPM-2000

Distance: 7.970 m

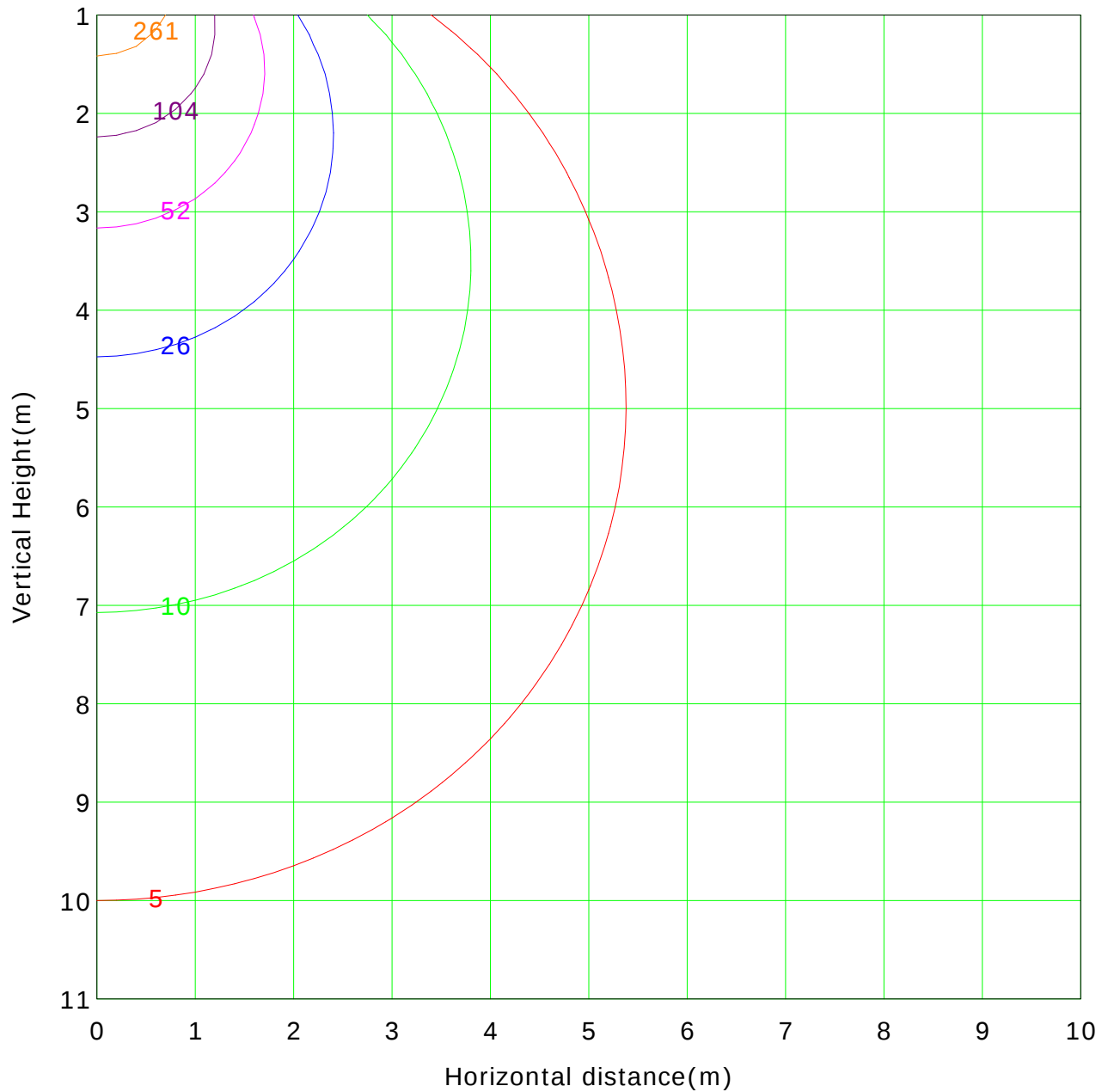
Humidity:

Inspector:

Illuminance at a Distance



Vertical IsoLux Plot



Lowest(m): 1.0m Highest(m): 11.0m Max Lux: 522.3 lx

(1%): 5.2 lx	(2%): 10.4 lx
(5%): 26.1 lx	(10%): 52.2 lx
(20%): 104.5 lx	(50%): 261.1 lx
(100%): 522.3 lx	

Report No.:

Test Time: 31/01/2020 11:02

Luminaire Property

Luminaire Manufacturer: Lighting line

Luminaire Description: LLP-SH03-03 + LLD-03-FM

Lamp Description: F52-400-60822

Number of Lamps: 2

Lumens per Lamp: 1579 lm

Voltage: 24.0 V

Current: 1.192 A

Power: 28.58 W

Power Factor: 1.000

Photometric Results

CIE Class: General Diffuse

Measurement Flux: 1584 lm

Downward Ratio: 25.08%

Total Rated Lamp Lumens: 3158.0 lm

Efficiency: 50.16%

Upward Ratio: 25.08%

Field Angle(C0/C180,C90/C270,C45/C225,C135/315): 360.0, 360.0, 360.0, 360.0

Beam Angle(C0/C180,C90/C270,C45/C225,C135/315): 360.0, 360.0, 360.0, 360.0

Luminaire Efficacy Rating (LER): 55.47

Central Intensity: 286.82 cd

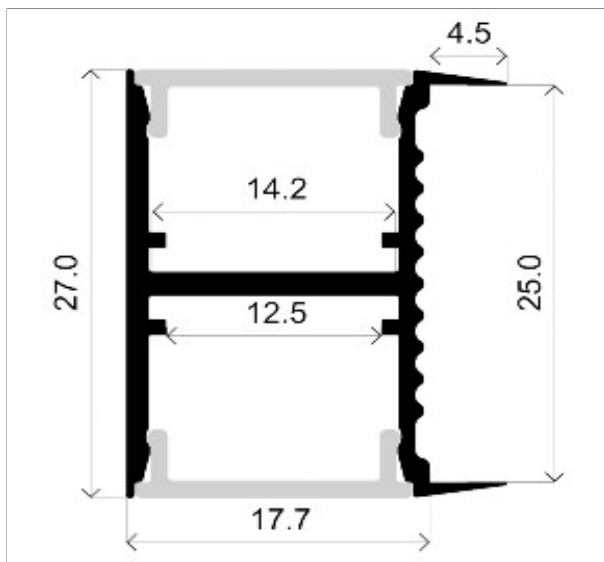
Max. Intensity: 286.93 cd

Pos of Max. Intensity: H70 V0

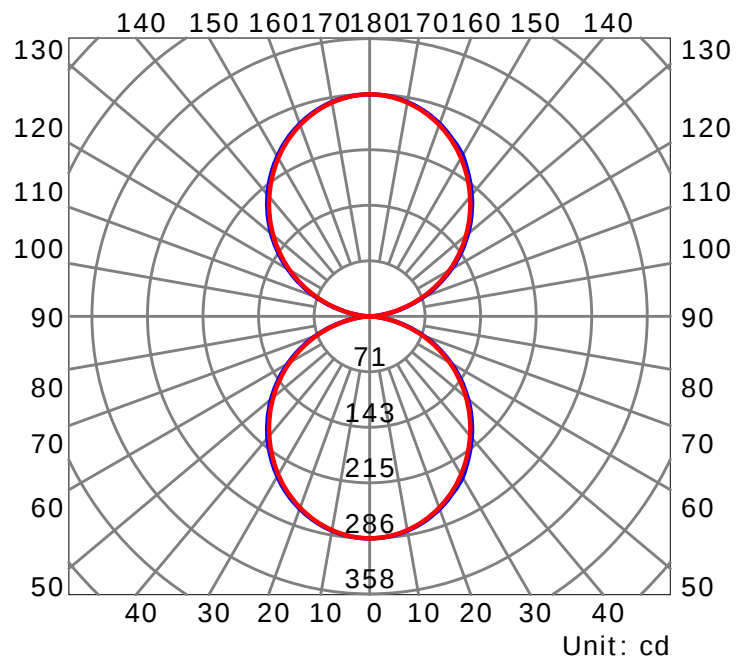
S/MH(C0/C180): 1.24

S/MH(C90/C270): 1.23

Picture Of Luminaire



Luminous Intensity Distribution Curve



— C0-C180 — C90-C270

C Plane (°):0.0-180.0: 10.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

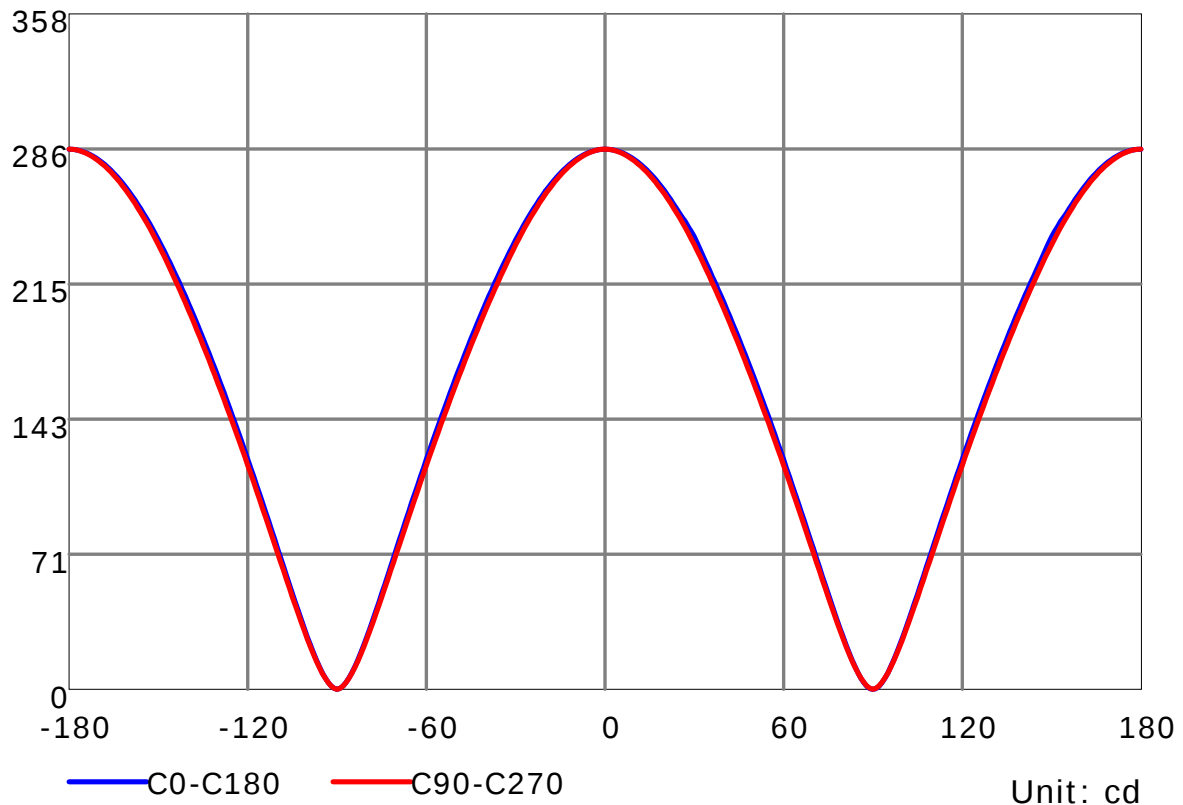
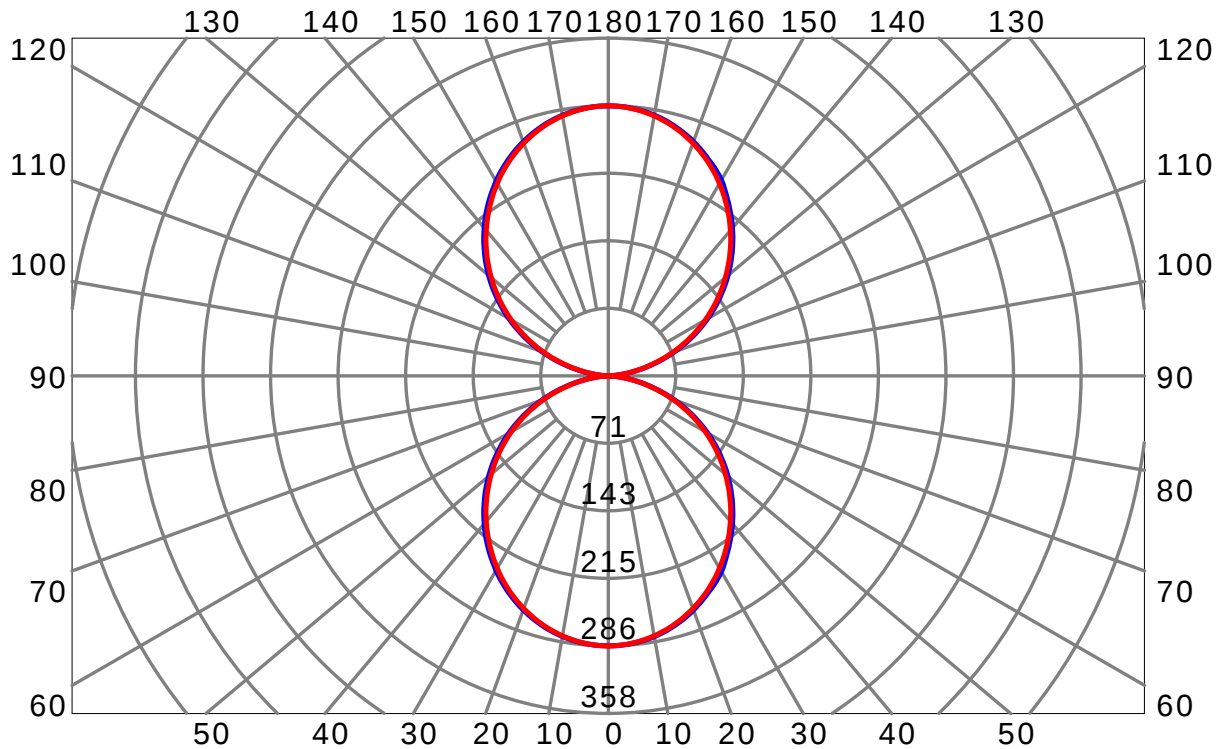
Test Device: GPM-2000

Distance: 7.970 m

Humidity:

Inspector:

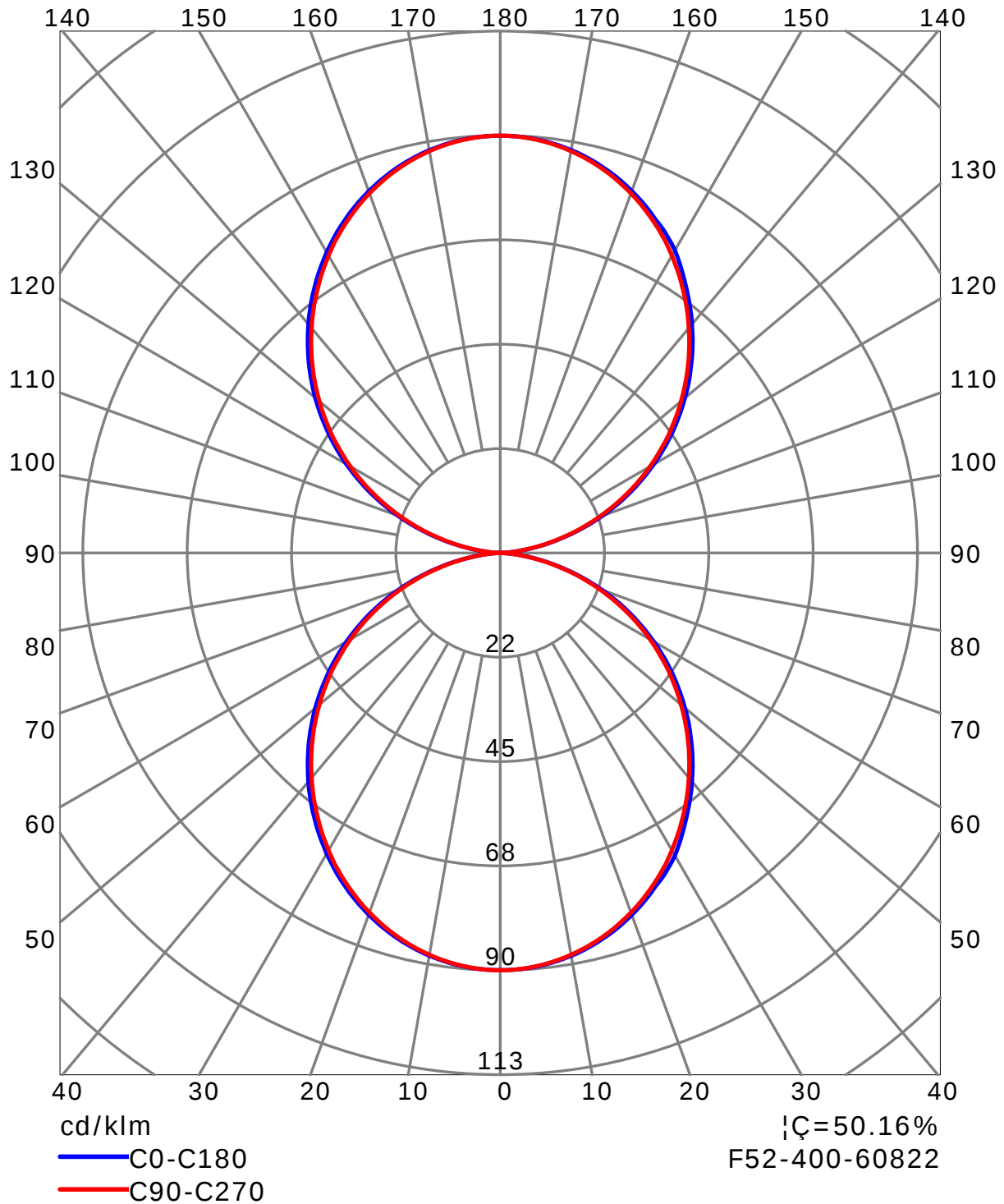
Luminous Intensity Distribution Curve



C Plane (°):0.0-180.0: 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:

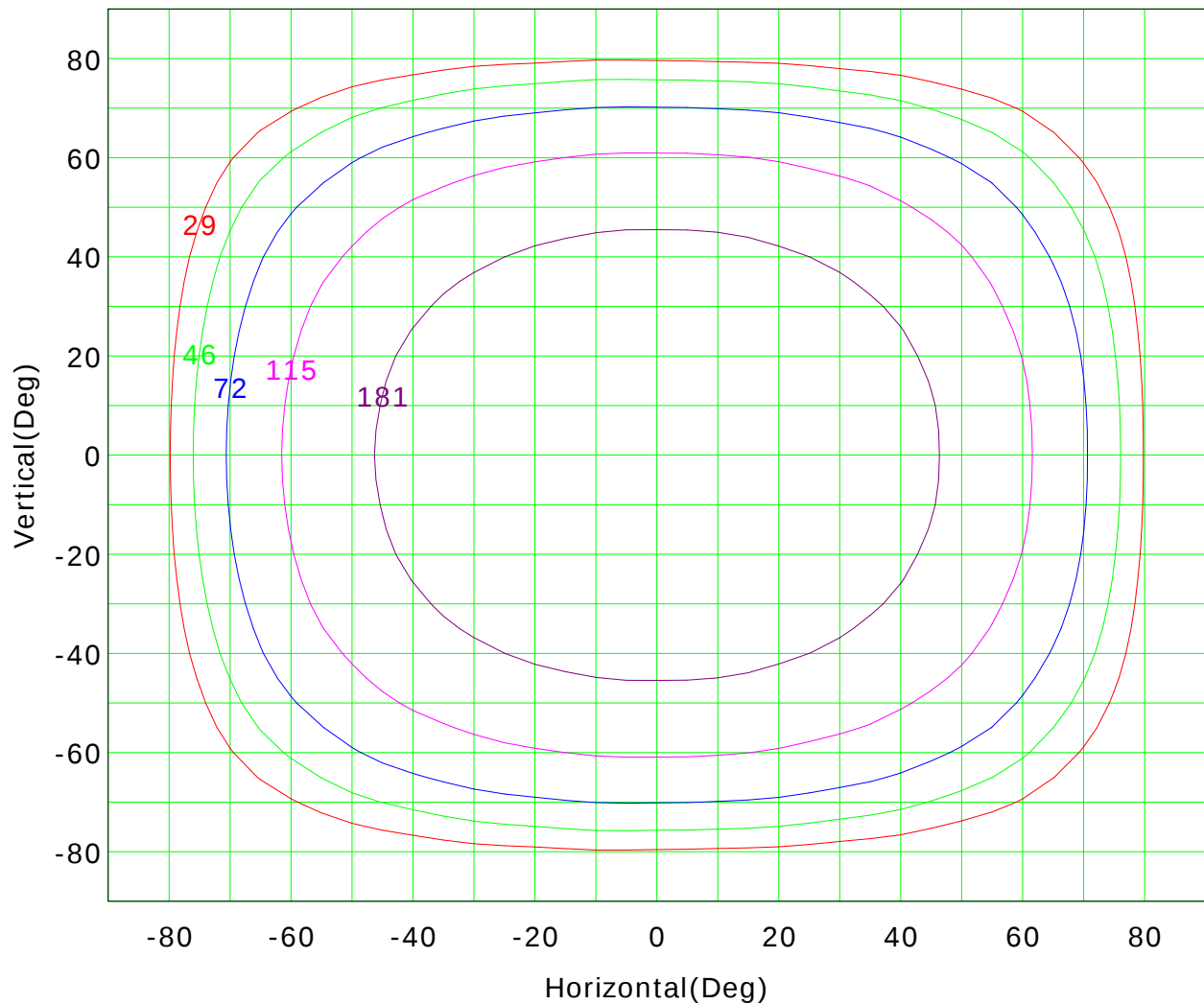
Luminous Intensity Distribution Curve(cd / klm)



C Plane (°):0.0-180.0: 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)



I_{max} (100%): 287 cd

(10%):	29 cd	(16%):	46 cd
(25%):	72 cd	(40%):	115 cd
(63%):	181 cd	(100%):	287 cd

C Plane (°):0.0-180.0: 10.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

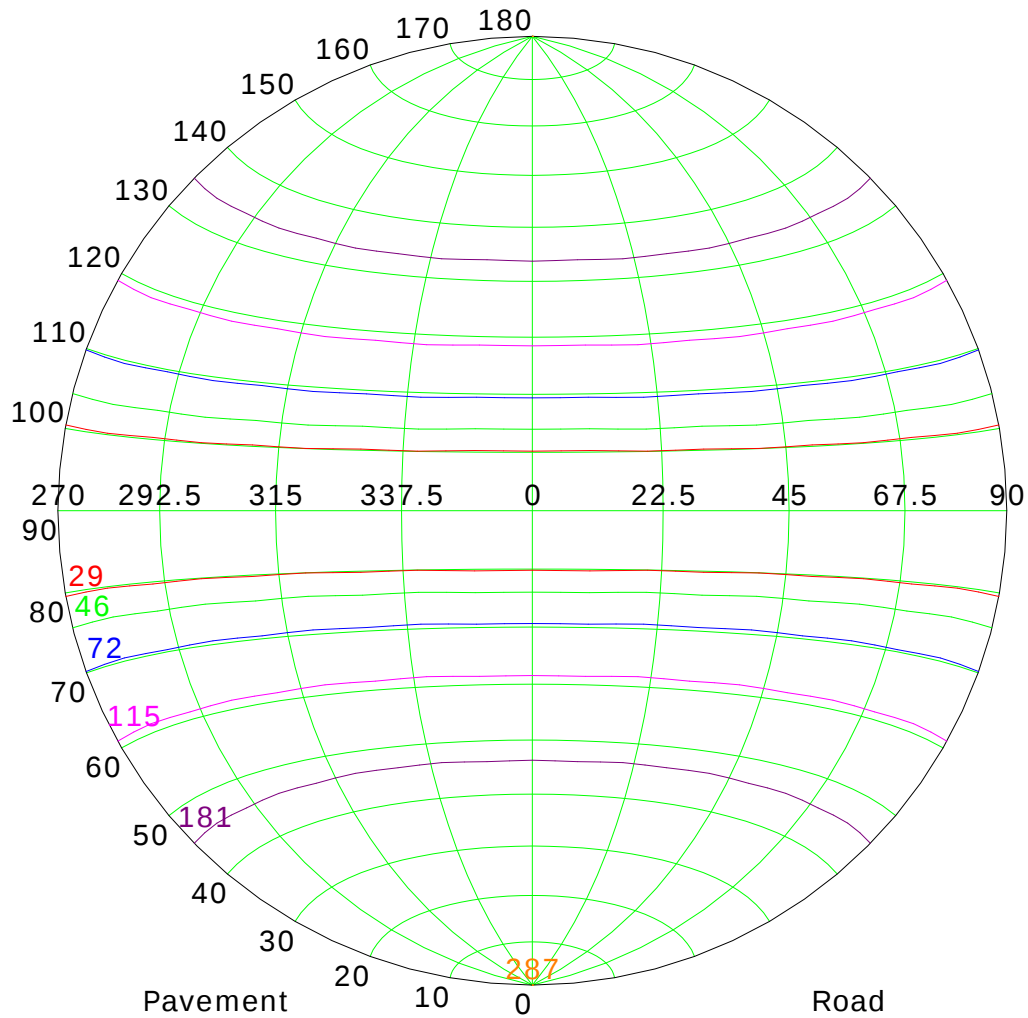
Test Device: GPM-2000

Distance: 7.970 m

Humidity:

Inspector:

Isocandela (sphere)



I_{max} (100%): 287 cd

(10%):	29 cd	(16%):	46 cd
(25%):	72 cd	(40%):	115 cd
(63%):	181 cd	(100%):	287 cd

C Plane (°):0.0-180.0: 10.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

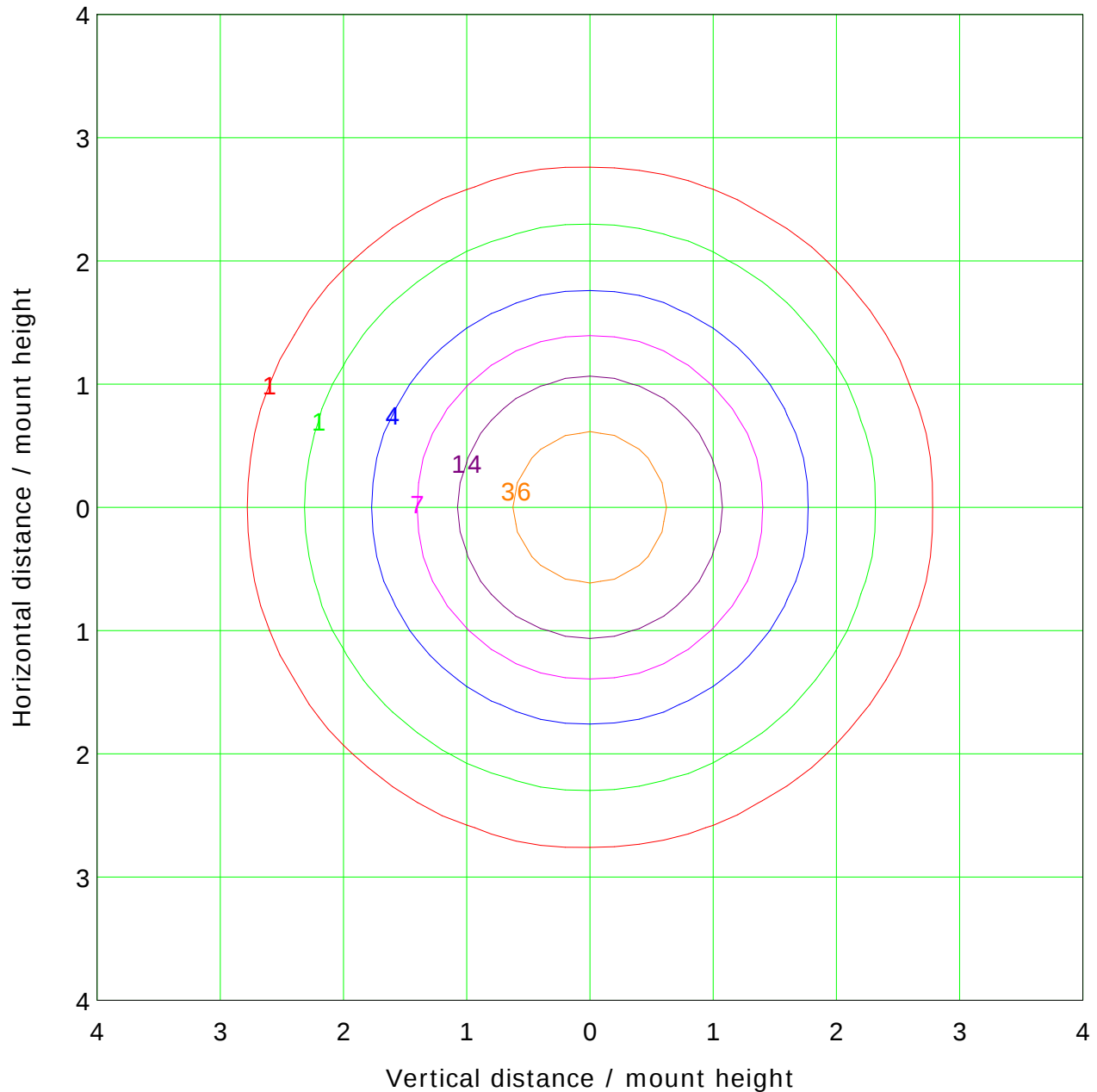
Test Device: GPM-2000

Distance: 7.970 m

Humidity:

Inspector:

IsoLux Plot



Mounting Height: 2.0m		Max Lux(100%): 71.7 lx	
— (1%):	0.7 lx	— (2%):	1.4 lx
— (5%):	3.6 lx	— (10%):	7.2 lx
— (20%):	14.3 lx	— (50%):	35.9 lx
— (100%):	71.7 lx		

C Plane (°):0.0-180.0: 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

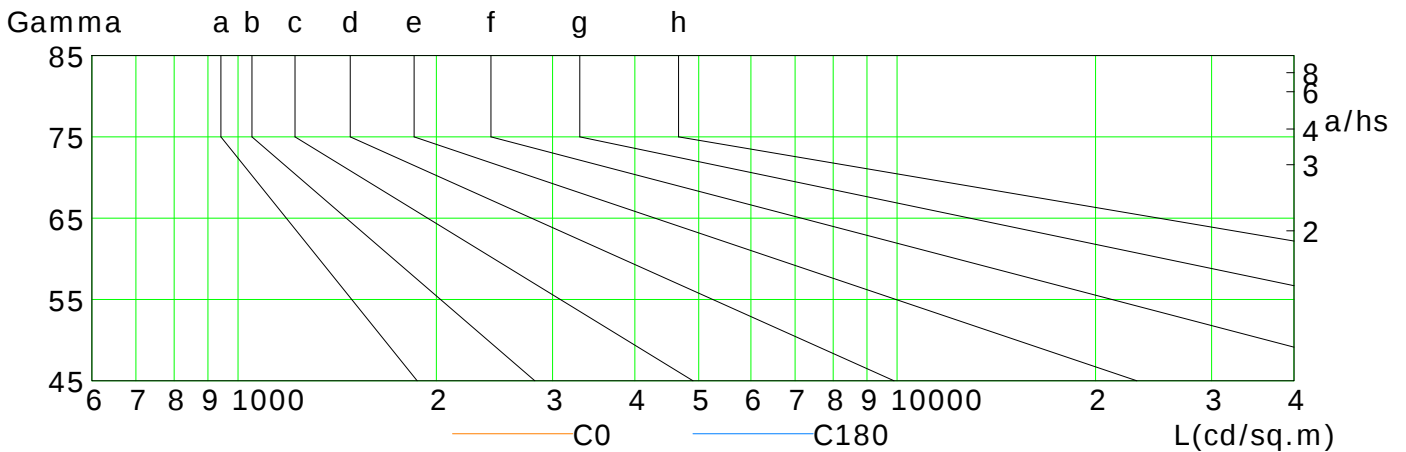
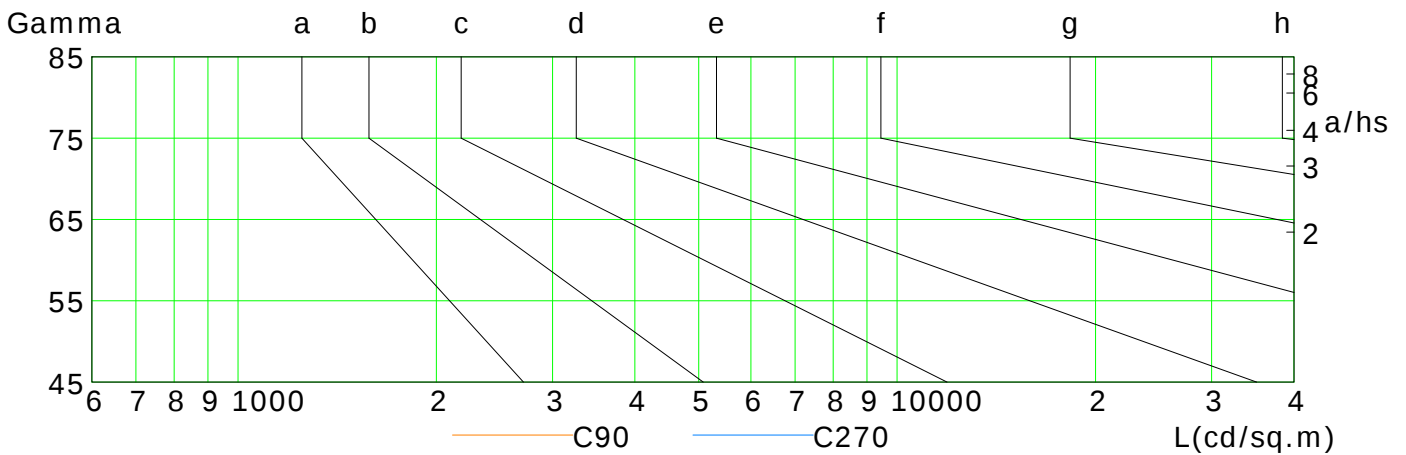
Humidity:

Inspector:

Lum Limit Curve

Dazzle	Quality	Illuminance (lx)							
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	186	166	144	122	99	75	51	28	9
C90	183	162	141	119	96	73	49	27	9
C180	186	166	145	122	99	75	51	28	9
C270	183	162	141	119	96	73	49	27	9

C Plane (°):0.0-180.0: 10.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

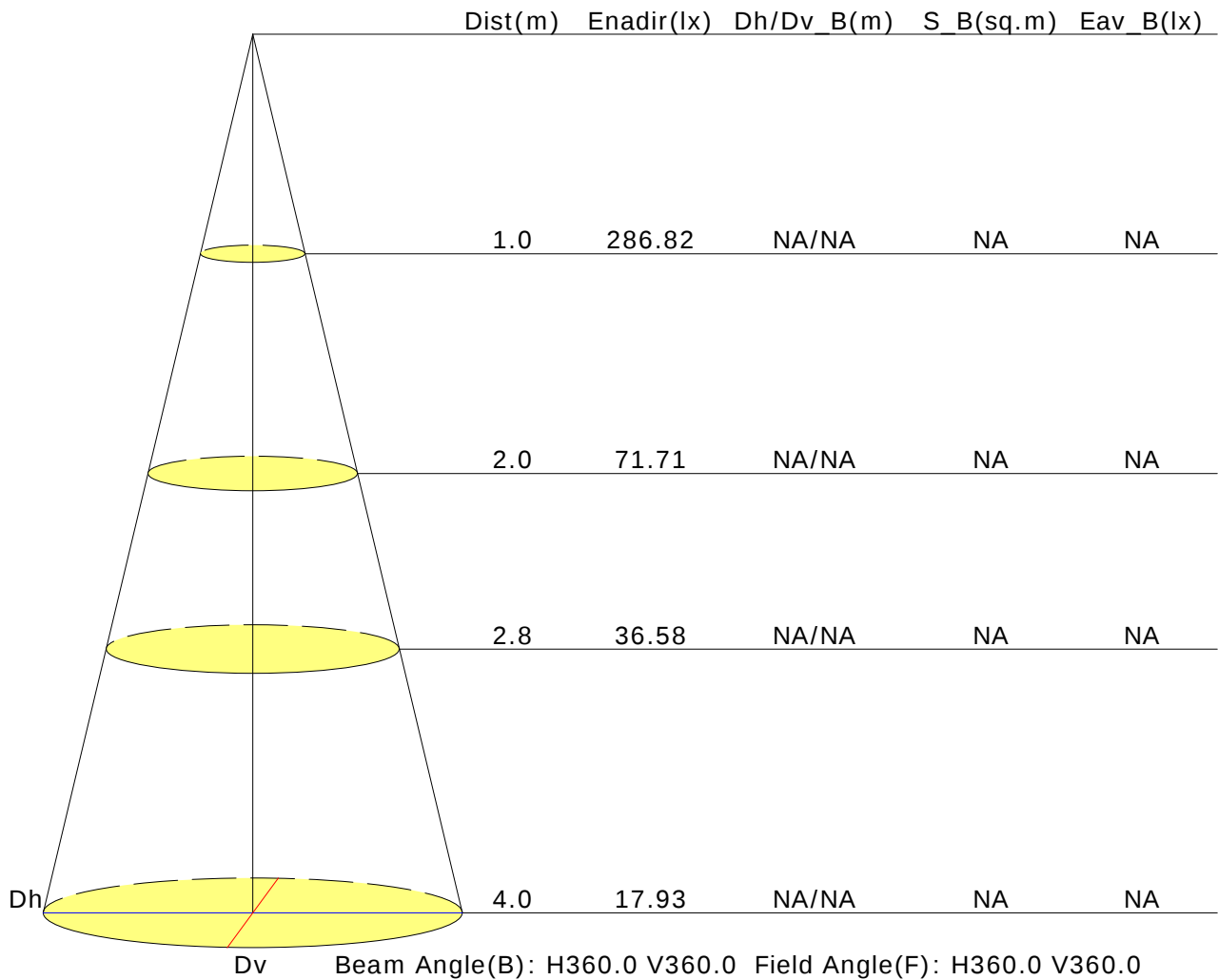
Test Device: GPM-2000

Distance: 7.970 m

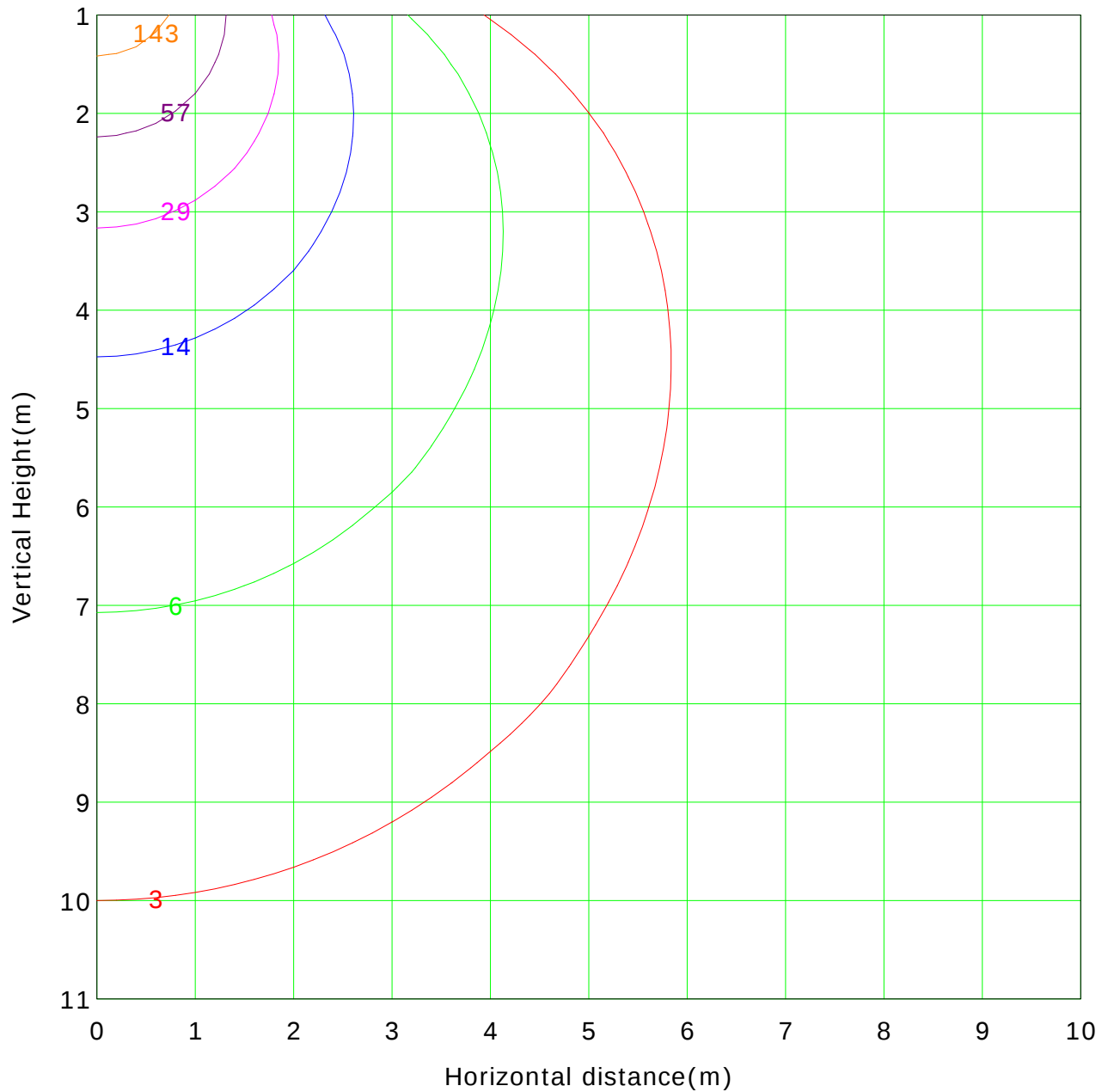
Humidity:

Inspector:

Illuminance at a Distance



Vertical IsoLux Plot



Report No.:

Test Time: 31/01/2020 11:49

Luminaire Property

Luminaire Manufacturer: Lighting line

Luminaire Description: LLP-SH03-03 + LLD-03-FS

Lamp Description: F52-400-60822

Number of Lamps: 2

Lumens per Lamp: 1579

Voltage: 24.0 V

Current: 1.176 A

Power: 28.20

Power Factor: 1.000

Photometric Results

CIE Class: General Diffuse

Measurement Flux: 1564.4 lm

Downward Ratio: 24.77%

Total Rated Lamp Lumens: 3158.0 lm

Efficiency: 49.54%

Upward Ratio: 24.77%

Field Angle(C0/C180,C90/C270,C45/C225,C135/315): 360.0, 360.0, 360.0, 360.0

Beam Angle(C0/C180,C90/C270,C45/C225,C135/315): 360.0, 360.0, 360.0, 360.0

Luminaire Efficacy Rating (LER): 55.52

Central Intensity: 295.94 cd

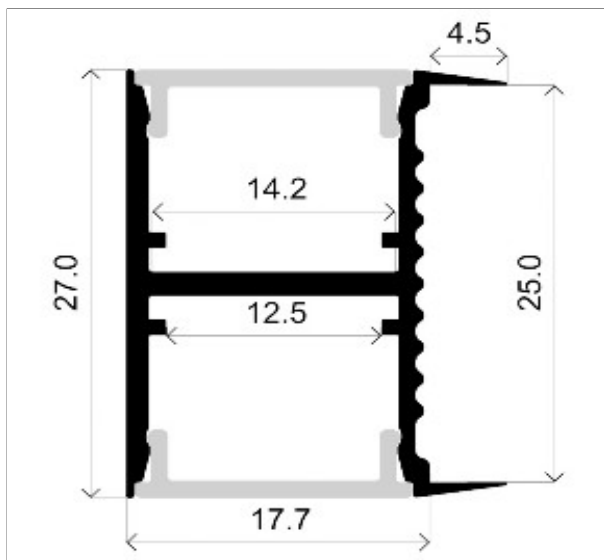
Max. Intensity: 295.95 cd

Pos of Max. Intensity: H0 V0

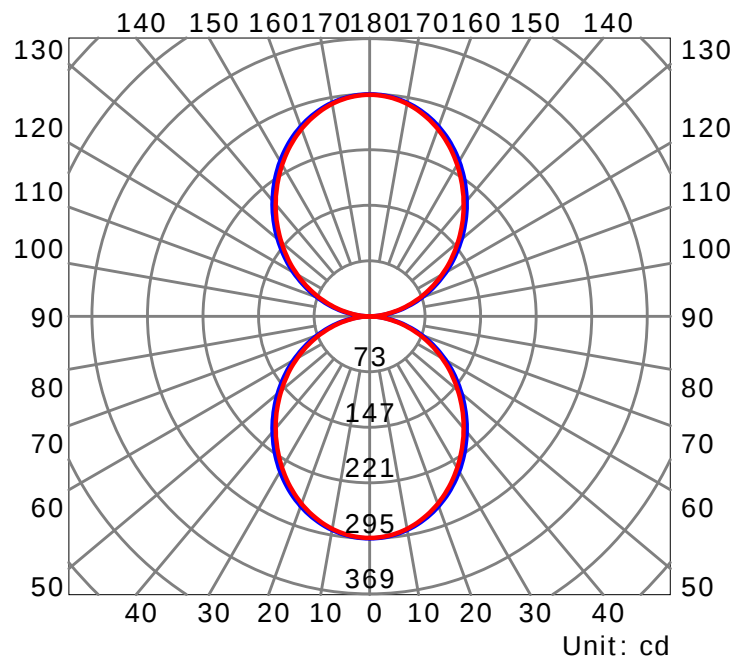
S/MH(C0/C180): 1.20

S/MH(C90/C270): 1.18

Picture Of Luminaire



Luminous Intensity Distribution Curve



— C0-C180 — C90-C270

C Plane (°):0.0-180.0: 10.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

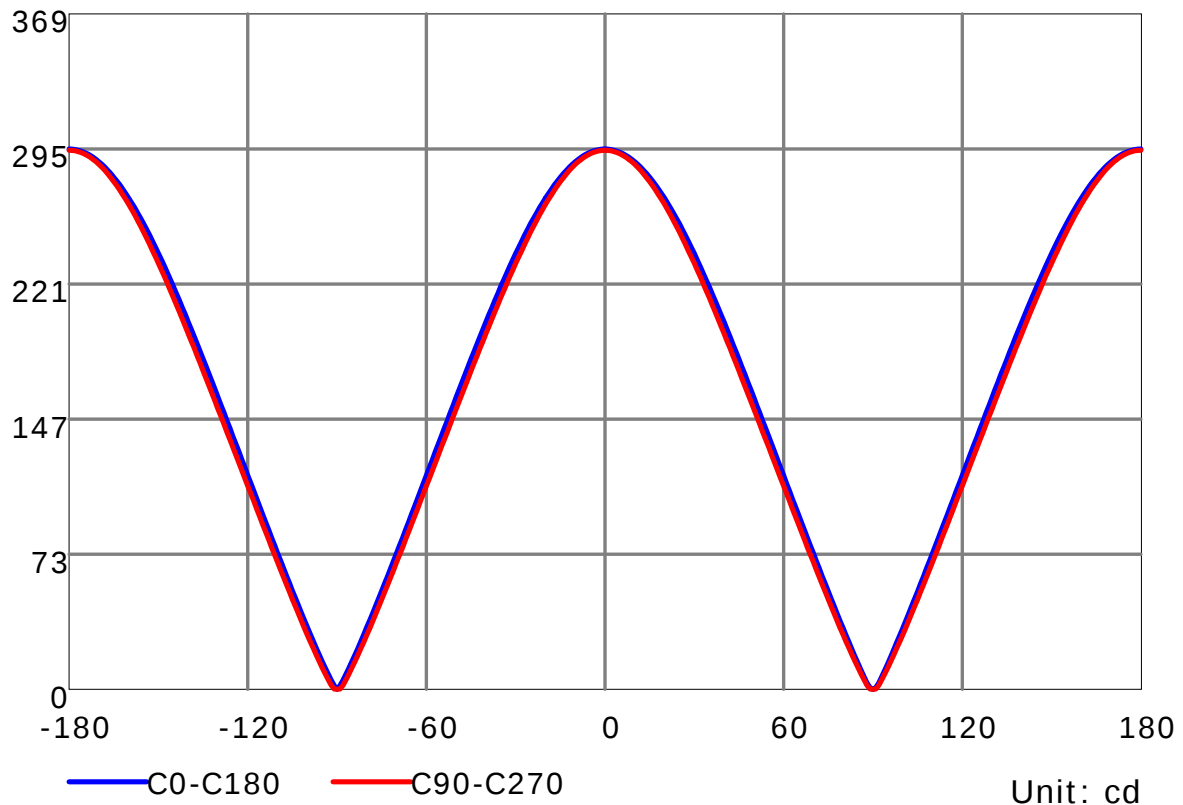
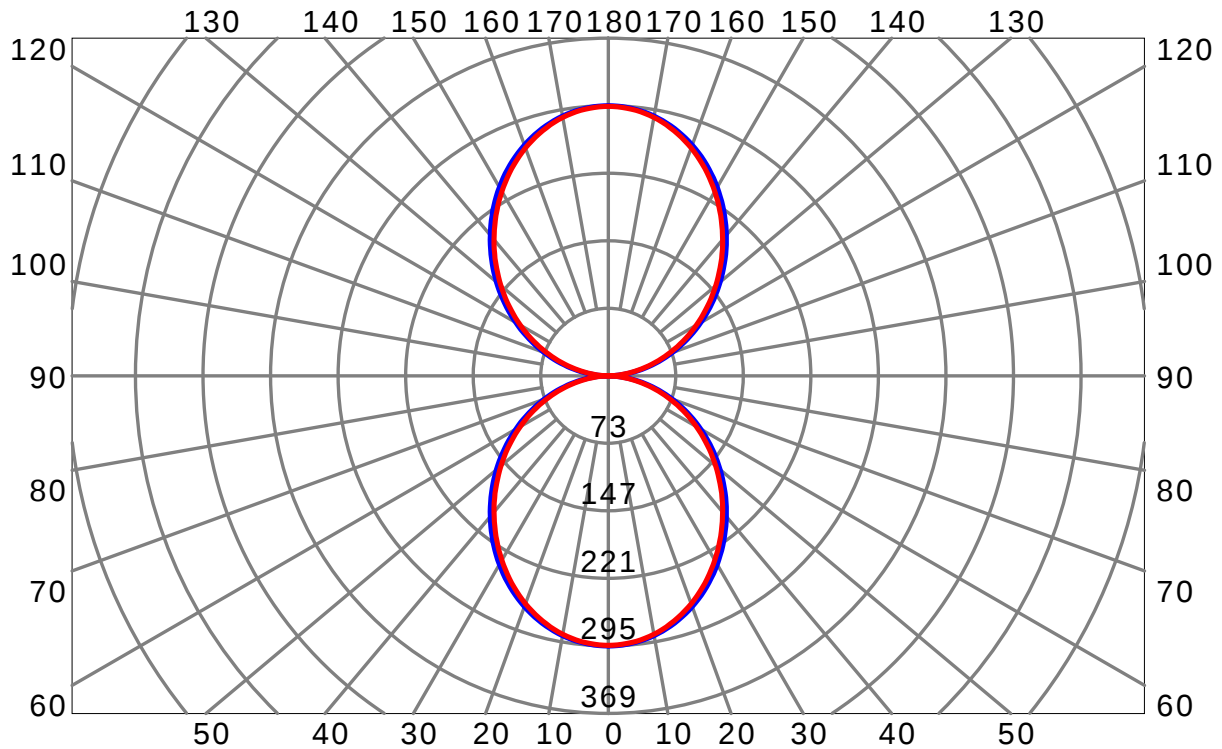
Test Device: GPM-2000

Distance: 7.970 m

Humidity:

Inspector:

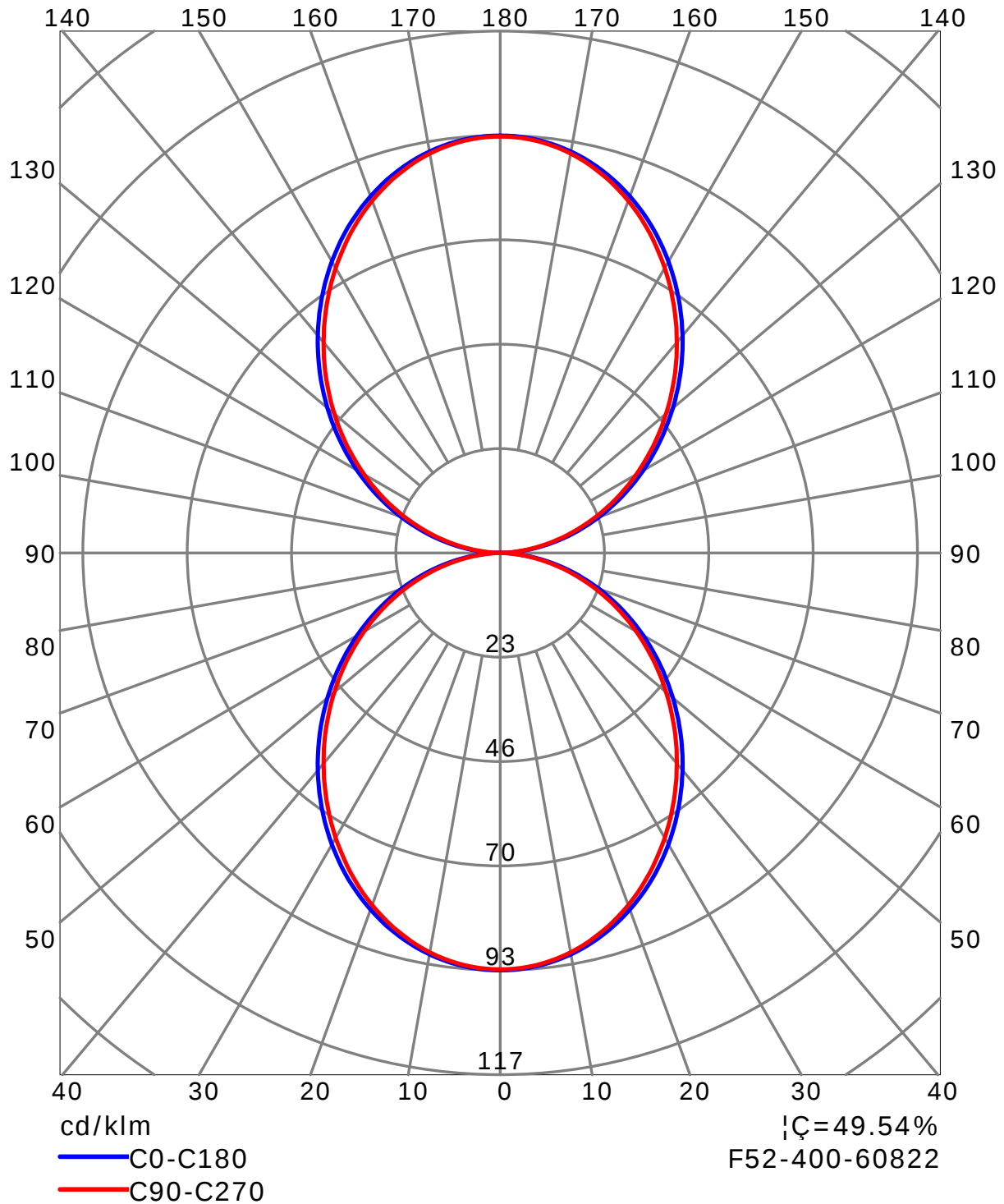
Luminous Intensity Distribution Curve



C Plane (°):0.0-180.0: 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:

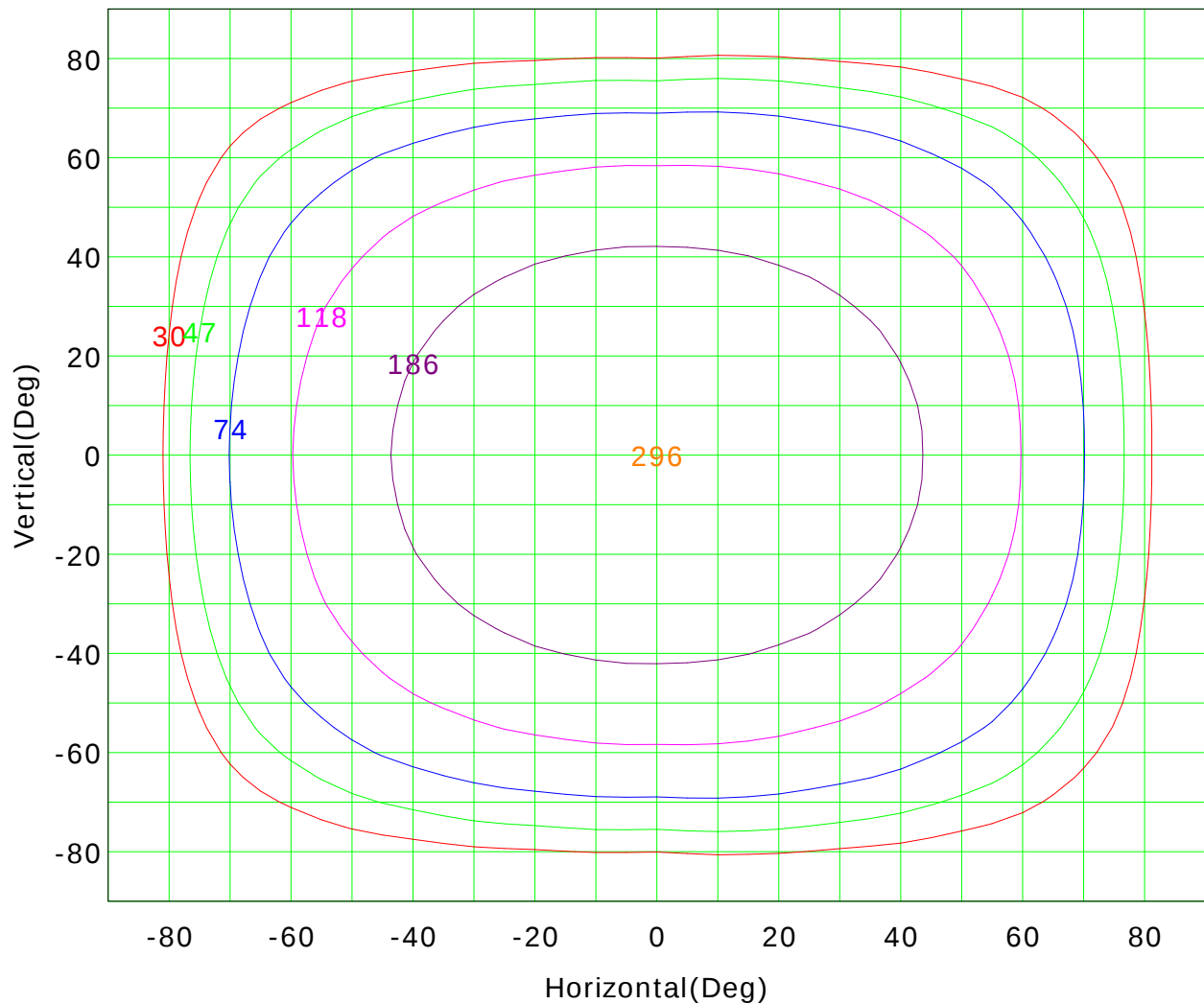
Luminous Intensity Distribution Curve(cd / klm)



C Plane (°):0.0-180.0: 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)



I_{max} (100%): 296 cd

(10%):	30 cd	(16%):	47 cd
(25%):	74 cd	(40%):	118 cd
(63%):	186 cd	(100%):	296 cd

C Plane (°):0.0-180.0: 10.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

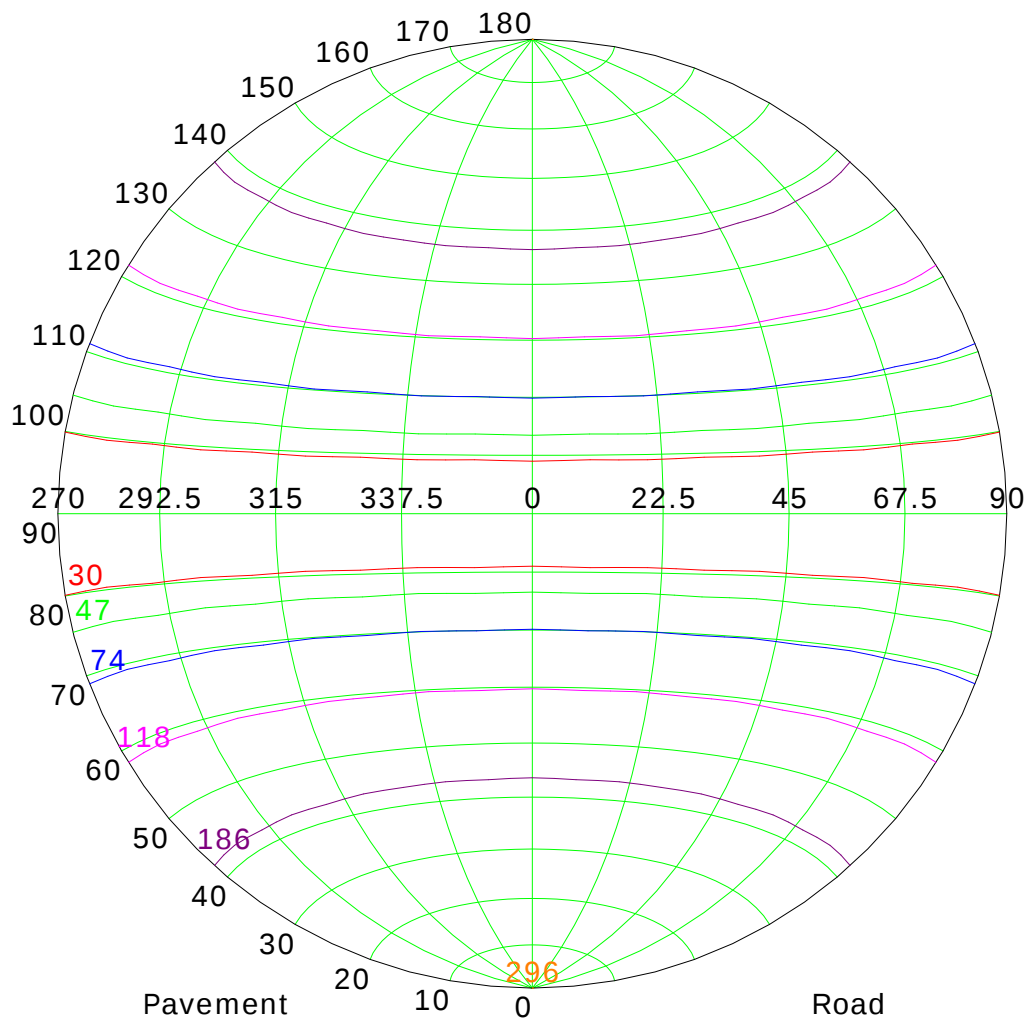
Test Device: GPM-2000

Distance: 7.970 m

Humidity:

Inspector:

Isocandela (sphere)



I_{max} (100%): 296 cd

(10%):	30 cd	(16%):	47 cd
(25%):	74 cd	(40%):	118 cd
(63%):	186 cd	(100%):	296 cd

C Plane (°):0.0-180.0: 10.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

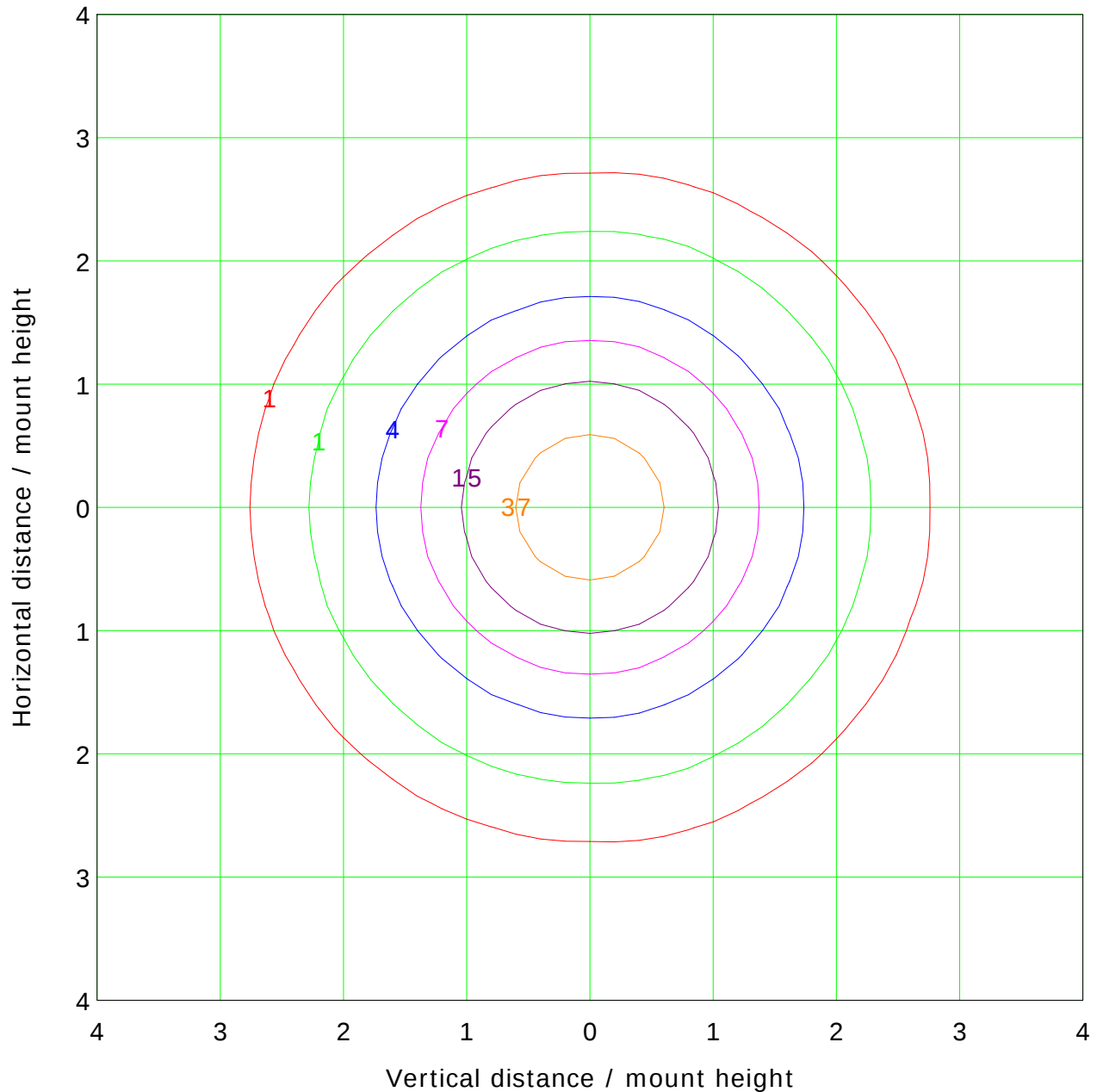
Test Device: GPM-2000

Distance: 7.970 m

Humidity:

Inspector:

IsoLux Plot



Mounting Height: 2.0m		Max Lux(100%): 74.0 lx	
— (1%):	0.7 lx	— (2%):	1.5 lx
— (5%):	3.7 lx	— (10%):	7.4 lx
— (20%):	14.8 lx	— (50%):	37.0 lx
— (100%):	74.0 lx		

C Plane (°):0.0-180.0: 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

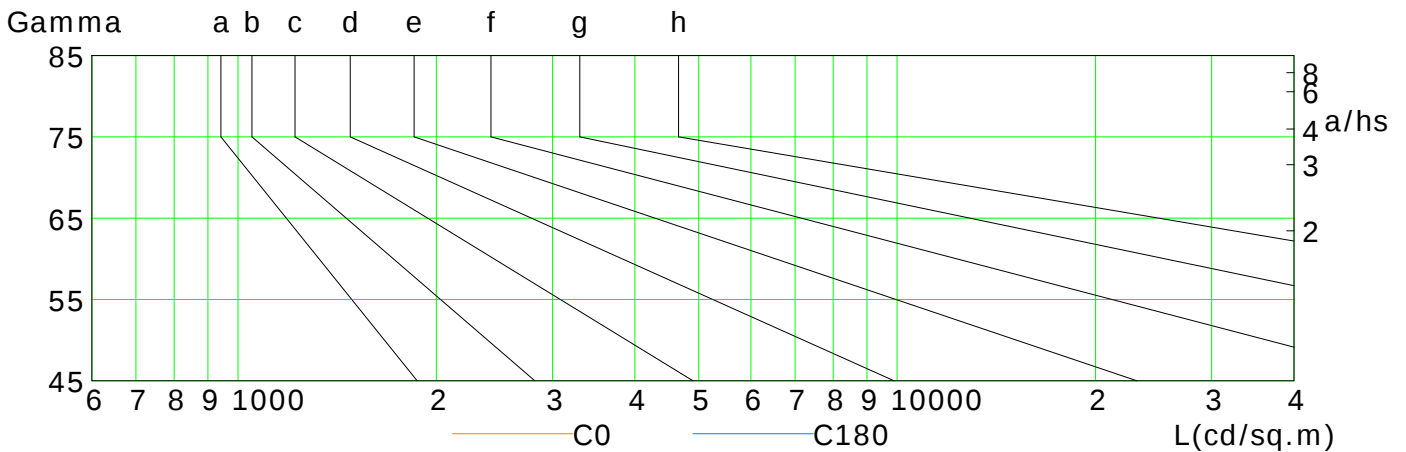
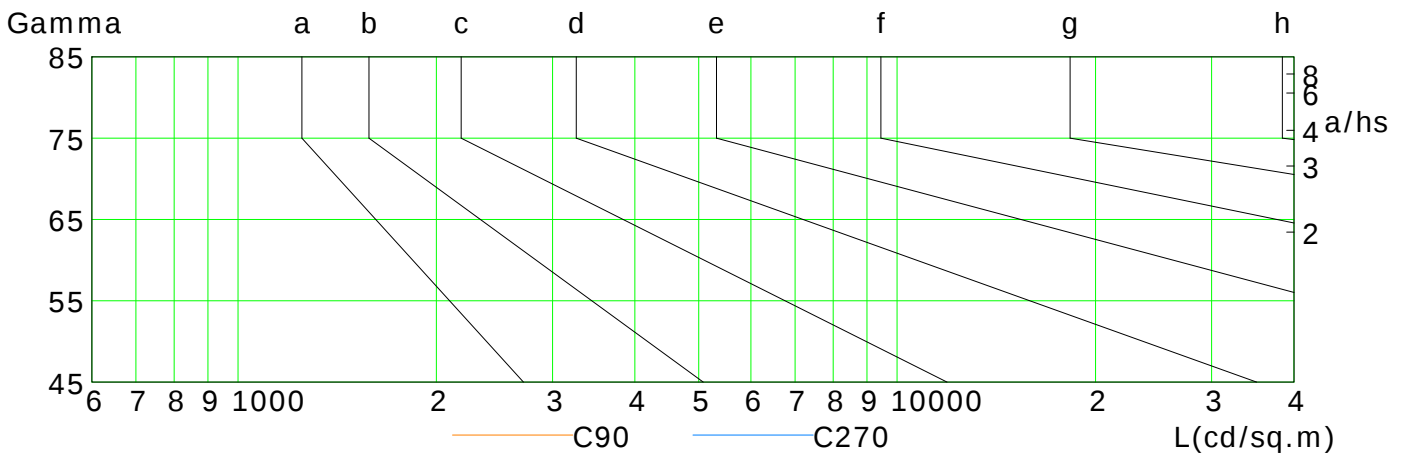
Humidity:

Inspector:

Lum Limit Curve

Dazzle	Quality	Illuminance (lx)							
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	181	160	138	117	96	75	54	33	14
C90	175	154	133	111	90	70	49	30	12
C180	181	160	139	117	96	75	54	34	15
C270	175	154	133	111	90	70	49	30	12

C Plane (°):0.0-180.0: 10.0

Test Lab:

Test Type: TYPE C

Temperature:

Operator:

Gamma Plane (°):0.0-180.0:1.0

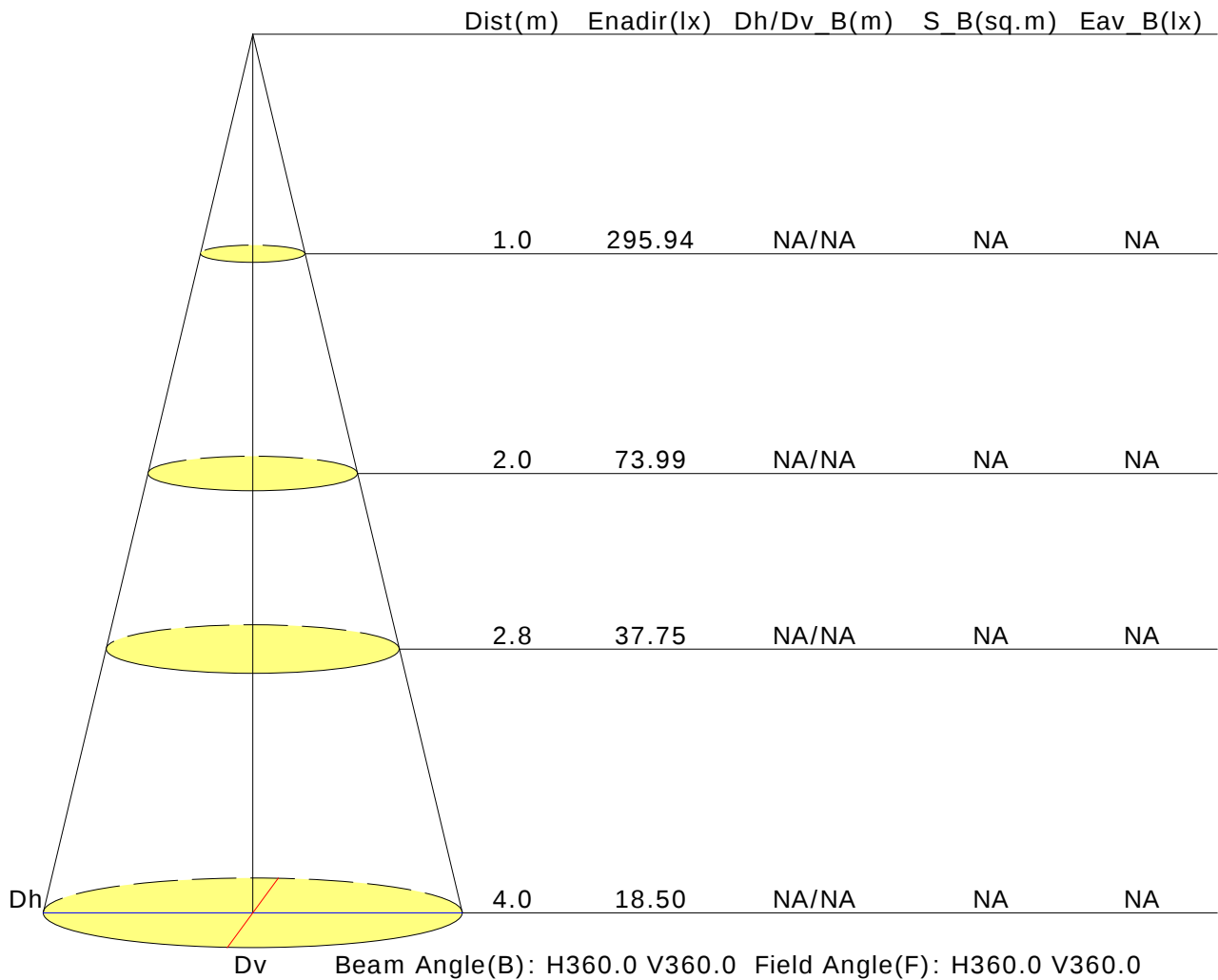
Test Device: GPM-2000

Distance: 7.970 m

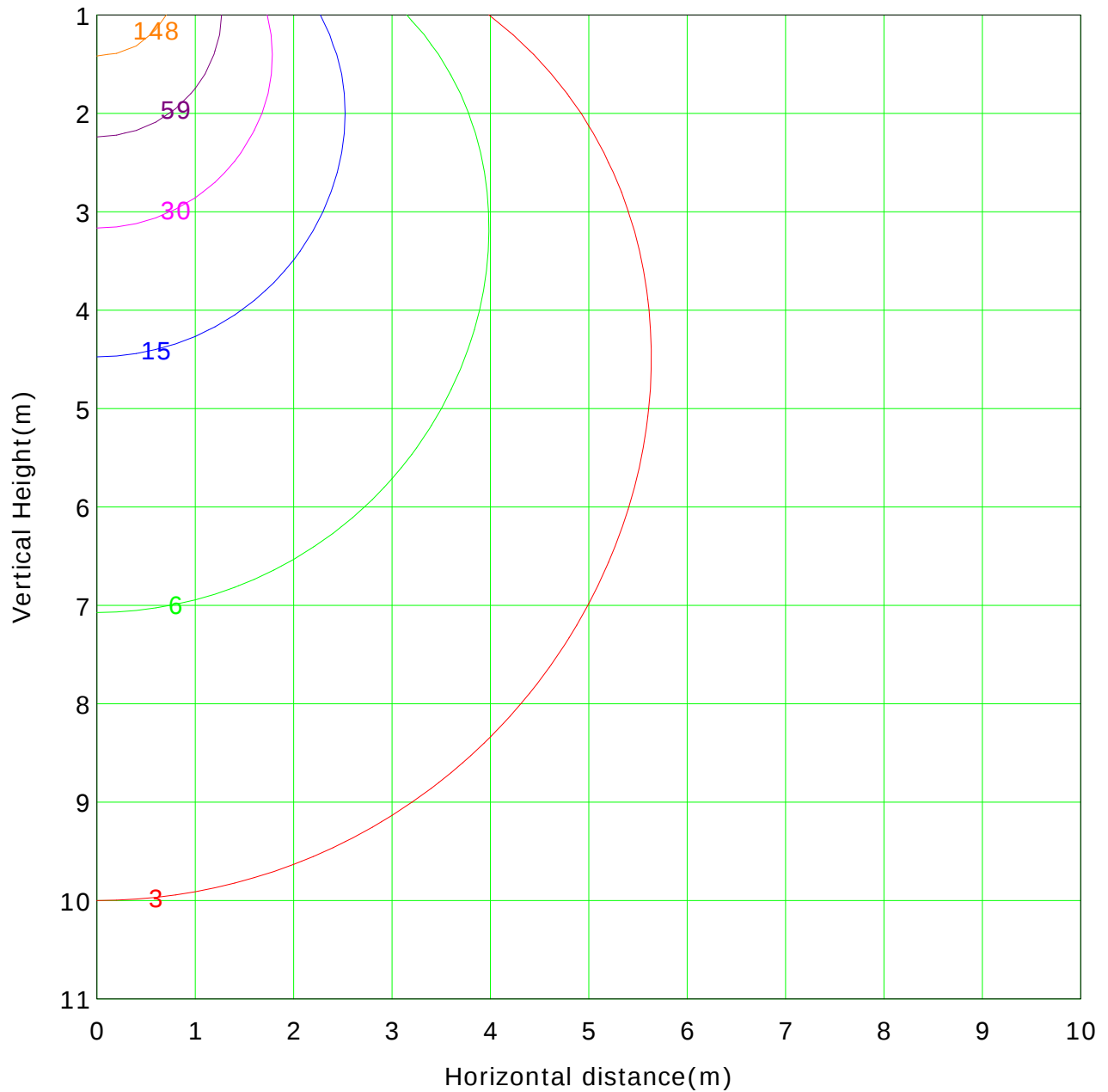
Humidity:

Inspector:

Illuminance at a Distance



Vertical IsoLux Plot



Lowest(m): 1.0m Highest(m): 11.0m Max Lux: 295.9 lx
— (1%): 3.0 lx — (2%): 5.9 lx
— (5%): 14.8 lx — (10%): 29.6 lx
— (20%): 59.2 lx — (50%): 148.0 lx
— (100%): 295.9 lx

C Plane (°):0.0-180.0: 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: