

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2024 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P243248

Luminaire Tested: S122RDRP-H485D927-X4F0-XX-UDD-A-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P243248
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-68)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122RDRP-H485D927-X4F0-XX-UDD-A-W
Description: DEFINE 2 REGRESSED DIRECT RECESSED WITH ASYMMETRIC FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 2700K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

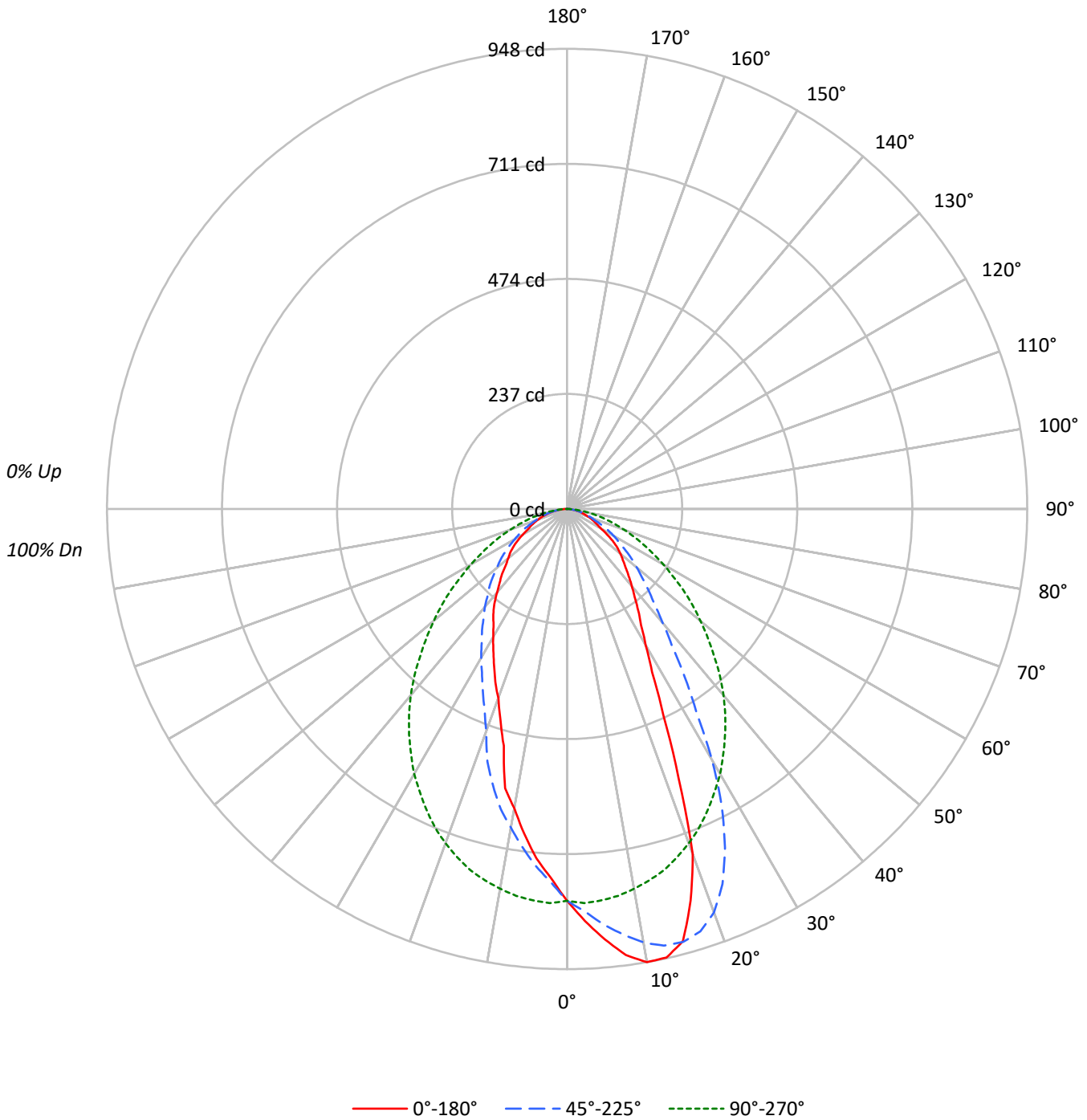
Lumens per Lamp: N/A
Luminaire Lumens: 1360.1 lumens
Efficiency: N/A
Efficacy: 79.1 lumens/watt
Spacing Criteria (0/90/45): 0.81 / 1.17 / 0.99
Luminous Opening: Rectangular (W 3.88' x L: 0.15' x H: 0')
CIE Type: Direct

Input Watts (W): 17.2
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P243248

CATALOG NUMBER: S122RDRP-H485D927-X4F0-XX-UDD-A-W

Luminous Intensity Polar Plot





TEST NUMBER: P243248

CATALOG NUMBER: S122RDRP-H485D927-X4F0-XX-UDD-A-W

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					20					20					
RC	80					70					50					30					10					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	110	106	103	100	108	104	101	98	100	97	95	96	94	92	93	91	89					87				
2	102	95	89	84	100	93	88	83	90	85	81	86	83	79	84	80	78					76				
3	94	85	78	72	92	84	77	72	81	75	70	78	73	69	76	72	68					66				
4	87	77	69	63	85	76	68	63	73	67	62	71	65	61	69	64	60					58				
5	81	70	62	56	79	69	61	56	67	60	55	65	59	54	63	58	54					52				
6	76	64	56	50	74	63	55	50	61	54	49	60	54	49	58	53	49					47				
7	71	59	51	45	69	58	50	45	56	50	45	55	49	44	54	48	44					42				
8	66	54	46	41	65	53	46	41	52	45	41	51	45	40	50	44	40					38				
9	62	50	43	38	61	50	42	37	48	42	37	47	41	37	46	41	37					35				
10	59	47	39	35	58	46	39	35	45	39	34	44	38	34	44	38	34					33				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	15372	15372	15372	15372	15372
5°	17015	16421	15476	14122	13815
10°	18336	17539	15369	12897	12116
15°	18174	18211	15190	11633	9956
20°	15330	17921	14854	9882	8404
25°	9857	16172	14397	8646	7482
30°	7122	13115	13863	7788	6702
35°	5932	9820	13196	7111	6164
40°	5147	7611	12462	6559	5582
45°	4596	6373	11532	6104	5107
50°	4240	5547	10620	5604	4694
55°	3806	4789	9700	5227	4473
60°	3040	4213	8731	4747	4023
65°	2785	3583	7842	4358	3714
70°	2556	2957	6928	3871	3531
75°	2333	2642	6064	3672	3341
80°	2029	2314	5035	3357	3126
85°	1617	1901	4043	3060	2885

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 75°
 Vertical Angle: 45°
 Luminance: 15265 cd/sqm

TEST NUMBER: P243248

CATALOG NUMBER: S122RDRP-H485D927-X4F0-XX-UDD-A-W

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	76.4	5.6
10°-20°	209.0	15.4
20°-30°	263.5	19.4
30°-40°	252.9	18.6
40°-50°	217.8	16.0
50°-60°	166.6	12.2
60°-70°	106.0	7.8
70°-80°	53.7	3.9
80°-90°	14.2	1.0
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	548.9	40.4
0°-40°	801.8	59.0
0°-60°	1186.2	87.2
0°-90°	1360.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1360.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	807	807	807	807	807	
5°	890	859	809	739	722	87
15°	922	924	770	590	505	250
25°	469	770	685	411	356	224
35°	255	422	568	306	265	161
45°	171	237	428	227	190	133
55°	115	144	292	157	135	101
65°	62	80	174	97	82	62
75°	32	36	82	50	45	34
85°	7	9	18	14	13	9
90°	0	0	0	0	0	



TEST NUMBER: P243248

CATALOG NUMBER: S122RDRP-H485D927-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	807.0	807.0	807.0	807.0	807.0	807.0	807.0	807.0	807.0	807.0	807.0
2.5°	849.8	850.9	851.4	850.1	847.2	847.4	844.8	840.3	834.7	829.7	832.6
5°	889.9	891.3	891.0	888.6	885.7	883.1	878.6	872.2	865.6	858.8	857.5
7.5°	926.9	929.8	929.0	924.5	922.4	918.7	911.1	903.9	893.9	884.1	880.2
10°	948.0	950.4	949.1	948.0	945.7	942.0	935.1	928.2	917.1	906.8	901.0
12.5°	946.4	948.6	949.6	950.7	949.9	948.6	945.7	939.8	930.9	921.4	914.0
15°	921.6	918.2	915.8	922.4	924.8	933.8	935.9	936.7	930.6	923.5	921.6
17.5°	846.1	847.2	865.4	862.5	866.4	888.4	897.1	908.9	914.0	912.4	915.6
20°	756.3	743.9	752.9	766.1	778.5	810.4	831.6	850.3	872.0	884.1	895.7
22.5°	600.0	600.2	621.9	643.6	671.5	706.1	738.4	774.3	812.8	836.3	863.5
25°	469.0	481.7	491.2	500.7	541.4	574.6	628.2	671.8	724.9	769.5	815.2
27.5°	379.2	392.4	394.0	415.4	439.4	466.4	501.5	570.1	624.5	690.0	746.5
30°	323.8	326.4	331.9	337.5	355.2	380.3	418.0	461.1	521.6	596.3	672.1
32.5°	283.6	283.1	288.6	297.3	307.1	324.0	345.4	381.1	435.7	495.1	583.6
35°	255.1	254.3	258.3	261.4	267.2	281.0	300.3	323.8	363.1	422.3	490.9
37.5°	228.2	229.7	232.1	235.6	243.2	251.9	264.9	284.4	315.6	354.7	420.4
40°	207.0	208.9	211.5	213.9	219.7	226.8	235.6	251.1	272.0	306.1	356.5
42.5°	188.0	188.8	190.9	194.4	198.6	204.9	213.4	225.3	242.7	266.5	310.6
45°	170.6	170.6	173.0	176.1	178.8	184.9	191.5	202.8	216.3	236.6	268.0
47.5°	155.8	156.1	157.4	157.9	160.8	166.4	173.5	182.5	193.6	209.1	238.5
50°	143.1	144.2	144.7	145.5	146.6	149.5	154.5	161.4	173.5	187.2	206.8
52.5°	129.9	131.2	132.3	133.9	135.5	135.7	139.4	143.9	152.4	166.6	182.5
55°	114.6	115.7	117.8	119.1	121.2	123.1	126.0	129.1	134.7	144.2	160.6
57.5°	97.2	97.4	99.6	100.9	105.1	109.3	112.0	115.4	119.4	126.0	138.4
60°	79.8	80.5	80.8	81.9	85.6	90.0	95.3	100.6	104.8	110.6	119.4
62.5°	70.2	70.5	71.3	72.4	72.6	74.7	76.3	82.7	90.0	95.9	101.7
65°	61.8	62.1	62.1	62.9	63.9	65.0	65.8	68.1	71.3	79.5	86.6
67.5°	53.9	53.6	54.1	54.9	55.2	56.0	57.3	58.6	60.7	63.1	70.5
70°	45.9	45.9	45.7	46.5	47.3	47.5	48.3	49.6	51.0	53.1	55.5
72.5°	38.0	38.6	38.6	39.1	39.3	40.4	40.9	41.5	43.3	44.4	46.2
75°	31.7	31.4	32.2	32.0	32.5	32.7	33.5	34.3	34.9	35.9	37.5
77.5°	25.4	24.8	25.4	25.1	25.6	26.1	26.1	26.9	27.5	28.5	29.3
80°	18.5	18.5	18.7	19.3	19.3	19.5	20.1	19.8	20.9	21.1	21.9
82.5°	12.7	12.9	12.9	13.2	13.2	13.2	13.7	13.7	14.0	14.5	14.8
85°	7.4	7.1	7.4	7.4	7.4	7.7	7.9	7.7	8.2	8.7	8.7
87.5°	2.1	2.1	2.4	2.6	2.6	2.9	2.9	2.9	3.2	3.2	3.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P243248

CATALOG NUMBER: S122RDRP-H485D927-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	807.0	807.0	807.0	807.0	807.0	807.0	807.0	807.0	807.0	807.0	807.0
2.5°	832.6	831.3	827.9	824.7	818.9	814.1	812.6	812.8	805.7	798.3	796.2
5°	855.6	850.9	844.0	836.9	828.1	819.4	813.9	809.4	798.3	787.2	780.9
7.5°	874.6	867.0	856.9	845.6	834.2	821.3	812.3	803.8	788.5	773.5	765.3
10°	892.0	881.2	867.5	852.7	837.6	820.7	807.8	794.6	775.3	758.4	744.4
12.5°	908.7	891.5	877.5	856.1	839.5	816.5	798.8	783.5	760.8	739.7	724.1
15°	910.3	898.1	879.4	857.2	831.8	810.4	788.3	770.3	744.4	720.9	694.3
17.5°	910.0	900.5	881.0	858.2	827.9	799.9	775.9	752.4	722.8	695.3	672.3
20°	900.5	893.9	877.0	850.1	819.4	787.2	760.5	732.8	698.2	670.0	644.9
22.5°	878.1	879.6	866.4	842.4	809.4	773.5	742.6	710.6	675.2	642.8	611.1
25°	840.0	856.9	853.0	830.5	795.4	756.0	720.9	685.0	647.0	612.4	583.1
27.5°	792.8	824.4	831.3	813.9	780.3	736.2	696.4	657.3	618.5	581.2	551.1
30°	736.8	784.0	801.5	792.0	761.1	714.9	668.6	630.3	587.8	548.2	516.5
32.5°	666.3	732.5	763.2	766.1	740.7	691.1	639.9	598.7	555.1	517.6	483.5
35°	587.6	668.9	718.8	732.3	714.1	664.9	611.1	567.5	521.0	483.3	448.9
37.5°	508.3	603.9	669.4	695.6	683.4	635.9	578.9	534.8	488.8	450.2	418.0
40°	435.5	526.3	611.3	652.3	648.6	604.5	546.9	501.2	454.5	418.8	383.4
42.5°	370.2	457.9	551.4	606.3	609.2	570.7	511.8	465.8	420.9	385.6	348.6
45°	318.7	395.9	488.5	554.0	566.7	535.0	475.3	428.1	387.1	353.9	316.9
47.5°	277.5	337.5	423.6	500.4	522.9	495.1	438.1	393.2	354.7	326.1	291.3
50°	241.9	298.1	371.3	442.3	475.3	454.5	401.1	358.4	323.5	296.0	265.4
52.5°	210.2	253.8	317.2	385.3	429.7	410.6	365.2	325.9	293.1	267.5	241.9
55°	184.1	220.5	276.5	337.2	378.2	367.6	327.2	292.1	263.3	239.0	218.1
57.5°	157.1	187.8	232.9	287.1	327.2	325.6	292.3	258.5	235.8	212.8	197.8
60°	133.6	158.4	195.2	241.1	281.5	281.8	255.9	229.2	209.7	189.9	175.6
62.5°	112.8	132.6	164.5	201.5	233.7	241.9	222.6	199.4	183.5	168.2	156.1
65°	94.8	109.6	133.6	167.2	192.5	203.6	190.9	174.0	160.8	147.1	136.3
67.5°	78.2	89.0	106.7	133.1	158.4	166.6	161.4	148.4	138.9	127.5	119.4
70°	61.5	70.8	83.2	103.0	123.9	135.2	133.6	124.4	116.5	108.3	100.6
72.5°	48.9	54.1	63.6	77.9	94.5	107.2	107.7	103.0	96.4	89.5	84.5
75°	39.3	41.7	46.2	57.3	70.5	81.1	84.8	82.4	77.1	72.9	69.5
77.5°	30.4	32.5	35.4	40.7	51.0	59.2	63.6	63.9	60.7	57.0	54.4
80°	22.7	23.5	25.6	28.3	33.5	40.7	45.9	45.9	44.1	42.3	40.7
82.5°	15.6	16.4	17.4	18.7	21.4	25.6	30.4	31.2	30.1	29.6	27.5
85°	8.7	9.5	10.0	10.8	11.9	14.0	17.4	18.5	18.7	17.2	16.1
87.5°	3.4	3.4	3.7	4.0	4.2	5.0	6.3	7.9	7.9	7.1	6.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P243248

CATALOG NUMBER: S122RDRP-H485D927-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	807.0	807.0	807.0	807.0	807.0	807.0	807.0	807.0	807.0	807.0	807.0
2.5°	793.5	789.9	785.1	780.9	775.1	769.3	768.2	770.3	770.8	768.2	769.0
5°	774.8	767.9	762.1	752.6	746.5	738.6	733.3	733.3	733.3	729.4	725.7
7.5°	755.3	746.0	734.9	725.9	713.5	703.2	698.2	695.8	691.1	687.1	682.6
10°	732.5	719.6	705.9	691.9	681.1	666.8	658.3	653.1	644.9	641.4	634.8
12.5°	705.9	692.9	676.3	653.6	650.4	633.0	621.1	611.3	601.3	593.1	590.2
15°	684.5	662.0	639.9	623.7	600.2	589.9	572.5	570.9	562.7	538.7	520.0
17.5°	649.9	629.8	605.3	587.3	568.6	545.6	527.1	508.9	491.4	474.5	474.0
20°	619.3	595.8	572.5	553.0	520.2	487.5	476.1	459.5	449.2	435.7	431.8
22.5°	585.7	561.2	532.1	503.6	465.3	444.7	432.3	419.1	408.8	402.7	396.6
25°	551.9	527.4	488.8	453.7	427.5	411.4	400.9	386.6	379.2	373.9	366.0
27.5°	518.9	487.7	447.1	419.1	398.0	379.7	370.2	358.6	350.4	343.6	338.5
30°	486.2	443.4	408.8	387.1	365.5	354.1	341.7	333.0	326.9	320.6	312.4
32.5°	450.2	405.4	382.9	356.2	343.6	327.2	318.2	309.2	301.3	296.8	293.9
35°	408.5	372.3	352.3	332.7	316.6	305.8	293.1	287.6	283.4	274.6	270.9
37.5°	373.1	347.0	325.9	308.4	293.7	282.0	276.2	266.7	260.6	257.7	253.8
40°	343.8	320.6	302.4	284.7	272.3	263.8	253.5	248.5	240.6	237.7	234.5
42.5°	318.5	297.1	278.1	264.6	253.8	242.2	236.9	228.4	225.0	217.9	215.2
45°	292.9	273.8	257.2	244.0	233.7	226.6	217.1	211.8	205.7	202.0	194.9
47.5°	267.2	250.3	236.6	225.5	216.5	207.8	199.9	195.4	187.8	183.8	180.1
50°	247.4	231.1	218.1	207.0	197.8	189.1	184.1	176.7	169.8	165.3	164.0
52.5°	223.9	209.7	197.8	189.3	180.1	173.8	166.9	158.7	155.3	150.8	149.7
55°	203.1	191.5	181.4	172.4	164.5	157.4	149.5	143.7	141.0	138.9	137.3
57.5°	183.5	172.4	163.2	155.0	148.1	140.8	134.2	130.7	128.3	126.0	124.4
60°	164.3	154.2	145.8	138.9	131.8	124.6	119.9	117.0	115.1	111.7	110.6
62.5°	147.1	137.8	129.1	122.8	116.2	110.6	106.7	102.7	99.8	97.2	91.6
65°	128.3	120.2	113.6	107.2	100.9	96.7	92.2	87.7	84.0	84.0	84.0
67.5°	111.7	104.6	97.7	92.2	86.6	81.6	77.1	76.8	75.5	75.0	74.2
70°	94.8	89.8	83.4	77.4	71.8	69.5	68.7	67.3	65.8	65.5	64.4
72.5°	79.5	73.7	67.9	62.6	61.5	60.5	58.9	57.6	56.5	55.7	55.2
75°	65.0	59.2	54.4	53.1	51.8	49.9	48.6	47.5	47.0	47.0	46.7
77.5°	49.6	46.2	44.1	42.0	40.9	39.9	39.1	38.6	37.8	38.0	37.5
80°	36.4	35.4	33.5	32.2	31.7	30.6	30.1	29.8	29.3	29.3	29.0
82.5°	26.1	24.3	23.5	22.7	22.2	21.7	21.9	21.7	21.4	21.1	21.4
85°	15.1	14.8	14.3	14.3	14.3	14.0	14.0	14.0	13.7	13.5	13.5
87.5°	6.6	6.9	6.9	6.3	7.1	7.1	6.9	6.9	6.6	7.1	6.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P243248

CATALOG NUMBER: S122RDRP-H485D927-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	807.0	807.0	807.0	807.0
2.5°	765.6	765.3	763.7	761.1
5°	724.1	723.0	720.4	722.5
7.5°	679.7	676.8	674.2	675.5
10°	632.2	631.1	629.6	626.4
12.5°	579.6	583.9	579.4	589.4
15°	501.7	520.5	497.0	504.9
17.5°	462.9	463.2	460.0	456.3
20°	426.5	417.2	420.7	414.6
22.5°	391.4	389.2	388.2	386.1
25°	359.9	356.0	354.7	356.0
27.5°	336.7	334.8	329.8	329.0
30°	307.6	306.9	305.3	304.7
32.5°	289.4	286.0	285.2	282.0
35°	269.1	267.2	265.9	265.1
37.5°	248.8	247.7	245.3	246.6
40°	232.1	226.8	224.7	224.5
42.5°	213.9	211.0	206.8	205.5
45°	192.8	191.5	190.1	189.6
47.5°	174.3	173.5	171.9	171.1
50°	161.1	159.0	158.7	158.4
52.5°	148.4	147.6	146.8	147.9
55°	136.5	135.5	134.7	134.7
57.5°	123.6	121.7	120.2	120.4
60°	108.5	107.5	106.2	105.6
62.5°	91.1	91.1	90.8	90.8
65°	82.9	82.4	82.1	82.4
67.5°	73.9	73.4	72.6	72.9
70°	63.6	63.4	63.6	63.4
72.5°	54.4	54.1	54.4	54.9
75°	45.9	45.7	45.4	45.4
77.5°	37.2	37.0	36.4	37.0
80°	29.0	28.8	28.5	28.5
82.5°	20.6	20.9	20.6	20.6
85°	13.5	13.7	13.5	13.2
87.5°	6.9	7.1	6.6	6.3
90°	0.0	0.0	0.0	0.0



TEST NUMBER: P243248
 CATALOG NUMBER: S122RDRP-H485D927-X4F0-XX-UDD-A-W

CIE UGR TABLE:

Reflectances:											
Ceiling		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	14.33	15.79	14.70	16.10	16.42	20.67	22.12	21.03	22.44	22.75
	3H	15.51	16.81	15.88	17.14	17.50	21.92	23.22	22.30	23.55	23.91
	4H	15.96	17.18	16.36	17.53	17.91	22.35	23.57	22.75	23.92	24.30
	6H	16.30	17.42	16.71	17.79	18.18	22.64	23.77	23.06	24.14	24.53
	8H	16.39	17.46	16.82	17.85	18.26	22.73	23.80	23.16	24.19	24.59
	12H	16.45	17.47	16.88	17.85	18.28	22.78	23.80	23.21	24.18	24.61
4H	2H	15.06	16.28	15.46	16.63	17.01	20.65	21.87	21.05	22.22	22.60
	3H	16.39	17.40	16.80	17.80	18.20	22.03	23.04	22.45	23.45	23.85
	4H	16.94	17.84	17.37	18.26	18.70	22.56	23.47	23.00	23.89	24.33
	6H	17.37	18.16	17.83	18.60	19.06	22.98	23.77	23.44	24.21	24.67
	8H	17.50	18.23	17.96	18.68	19.15	23.11	23.85	23.58	24.29	24.76
	12H	17.58	18.23	18.06	18.71	19.19	23.20	23.86	23.69	24.34	24.81
8H	4H	17.28	18.02	17.75	18.46	18.93	22.56	23.30	23.03	23.74	24.21
	6H	17.81	18.41	18.31	18.91	19.38	23.02	23.63	23.52	24.12	24.60
	8H	17.99	18.54	18.51	19.05	19.54	23.20	23.74	23.71	24.25	24.74
	12H	18.12	18.60	18.64	19.10	19.66	23.34	23.82	23.85	24.31	24.88
12H	4H	17.33	17.98	17.81	18.46	18.93	22.54	23.19	23.02	23.67	24.15
	6H	17.87	18.41	18.39	18.92	19.41	23.00	23.55	23.52	24.06	24.55
	8H	18.10	18.58	18.61	19.08	19.64	23.21	23.69	23.72	24.18	24.75