

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: P243774

Luminaire Tested: S125RDRP-H610D835-X4F0-XX-UDD-A-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P243774
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-71)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S125RDRP-H610D835-X4F0-XX-UDD-A-W
Description: DEFINE 5 REGRESSED DIRECT RECESSED WITH ASYMMETRIC FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

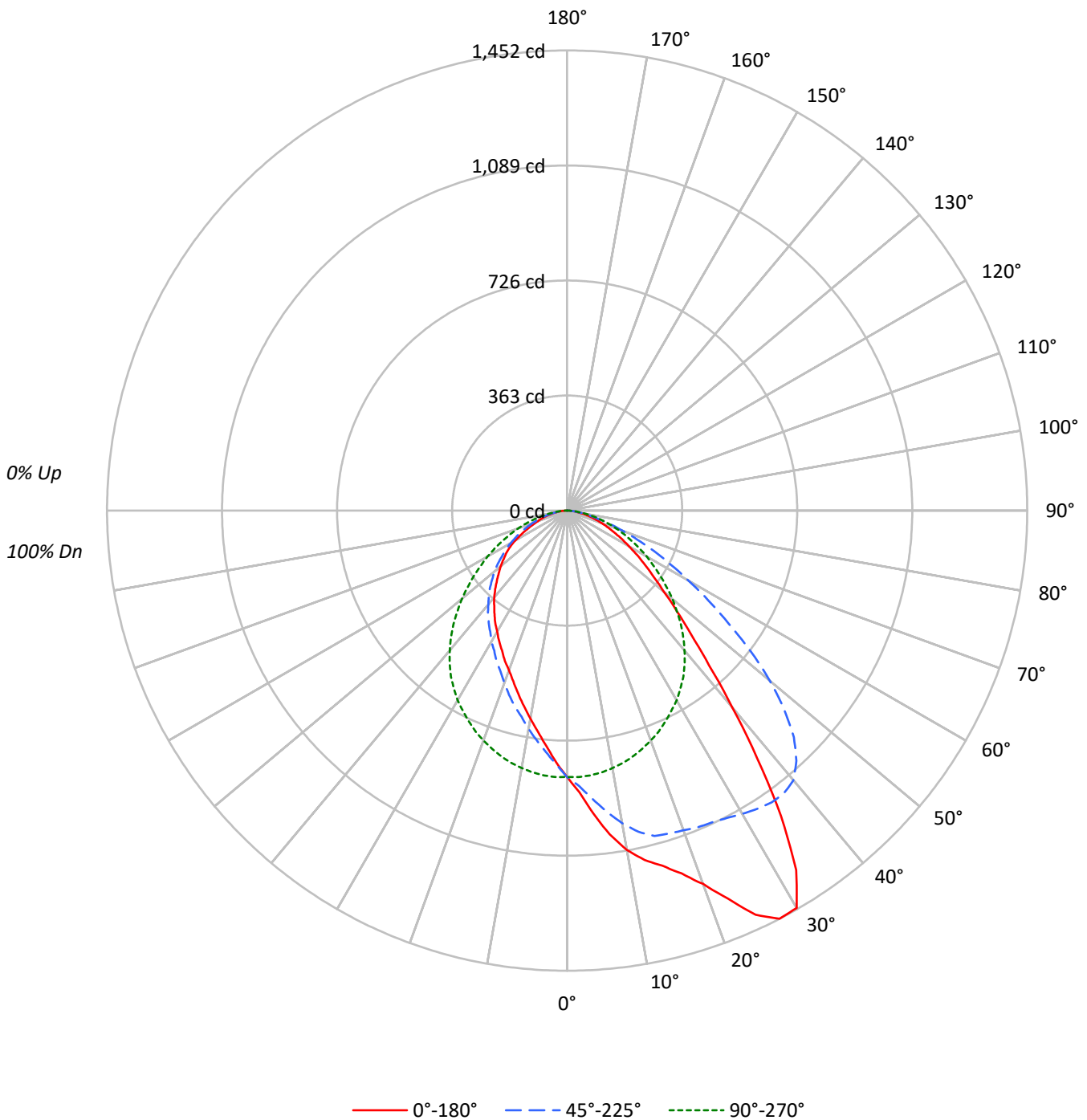
Lumens per Lamp: N/A
Luminaire Lumens: 2237.3 lumens
Efficiency: N/A
Efficacy: 130.1 lumens/watt
Spacing Criteria (0/90/45): 1.42 / 1.22 / 1.5
Luminous Opening: Rectangular (W 3.88' x L: 0.39' x H: 0')
CIE Type: Direct

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

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Luminous Intensity Polar Plot



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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	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	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86				86
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	75	73				73
3	92	83	75	69	90	81	74	68	78	72	67	75	70	66	73	69	65	63				63
4	85	74	65	59	83	72	65	59	70	63	58	68	62	57	66	61	56	54				54
5	78	66	58	51	76	65	57	51	63	56	51	61	55	50	59	54	50	48				48
6	73	60	51	45	71	59	51	45	57	50	45	56	49	44	54	48	44	42				42
7	67	54	46	40	66	54	46	40	52	45	40	51	44	39	49	44	39	37				37
8	63	50	42	36	61	49	41	36	48	41	36	47	40	35	45	40	35	33				33
9	59	46	38	32	57	45	38	32	44	37	32	43	37	32	42	36	32	30				30
10	55	42	35	29	54	42	34	29	41	34	29	40	34	29	39	33	29	27				27

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	5975	5975	5975	5975	5975
5°	6858	6516	5984	5456	5322
10°	7847	7229	5954	5050	4812
15°	8535	7822	5906	4702	4400
20°	9485	8121	5839	4377	4054
25°	11036	8506	5756	4125	3817
30°	11884	9069	5671	3912	3622
35°	10209	9755	5544	3742	3465
40°	7522	10308	5344	3591	3322
45°	5555	10169	5096	3458	3149
50°	4401	9229	4791	3314	3022
55°	3717	7704	4440	3110	2908
60°	3203	6293	4112	2918	2691
65°	2780	5079	3745	2679	2343
70°	2438	3859	3429	2425	2051
75°	2068	2809	3001	2142	1941
80°	1609	2034	2509	1883	1609
85°	1411	1492	2014	1606	1468

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 10169 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	80.9	3.6
10°-20°	239.4	10.7
20°-30°	381.8	17.1
30°-40°	463.6	20.7
40°-50°	417.8	18.7
50°-60°	321.3	14.4
60°-70°	208.5	9.3
70°-80°	100.3	4.5
80°-90°	23.7	1.1
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°	702.1	31.4
0°-40°	1165.8	52.1
0°-60°	1904.8	85.1
0°-90°	2237.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2237.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	841	841	841	841	841	
5°	961	913	839	765	746	96
15°	1160	1063	803	639	598	333
25°	1407	1085	734	526	487	644
35°	1177	1124	639	431	399	720
45°	553	1012	507	344	313	439
55°	300	622	358	251	235	272
65°	165	302	223	159	139	166
75°	75	102	109	78	71	81
85°	17	18	25	20	18	20
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	840.7	840.7	840.7	840.7	840.7	840.7	840.7	840.7	840.7	840.7	840.7
2.5°	889.3	892.7	890.0	891.7	889.0	887.7	884.3	879.3	874.3	869.7	869.3
5°	961.3	960.7	958.0	954.3	951.7	945.0	941.7	930.3	922.7	913.3	908.7
7.5°	1030.0	1028.3	1024.3	1019.3	1017.0	1008.3	999.0	984.7	972.7	958.0	947.0
10°	1087.3	1087.0	1084.0	1080.7	1071.7	1062.0	1053.0	1038.0	1020.0	1001.7	986.3
12.5°	1129.3	1127.6	1124.0	1118.3	1111.0	1104.3	1092.3	1078.7	1056.7	1038.0	1017.0
15°	1160.0	1159.3	1154.0	1152.0	1137.6	1128.3	1112.3	1098.6	1081.7	1063.0	1040.3
17.5°	1200.6	1202.0	1197.3	1186.0	1173.0	1158.6	1136.0	1113.6	1090.0	1068.3	1050.0
20°	1254.0	1250.6	1242.6	1229.0	1205.6	1188.0	1165.3	1137.6	1105.6	1073.7	1047.3
22.5°	1325.3	1321.6	1309.0	1292.3	1263.0	1230.6	1196.0	1154.6	1118.0	1081.3	1046.7
25°	1407.3	1400.3	1381.6	1363.6	1322.0	1287.6	1236.0	1186.6	1133.3	1084.7	1045.7
27.5°	1452.0	1452.0	1443.3	1423.6	1390.6	1340.0	1287.3	1221.6	1160.0	1093.3	1038.0
30°	1448.0	1445.6	1449.0	1440.6	1419.3	1381.3	1329.0	1260.0	1181.3	1105.0	1038.7
32.5°	1344.6	1345.6	1365.6	1379.3	1390.0	1380.6	1346.6	1284.3	1206.0	1116.3	1036.0
35°	1176.6	1179.3	1214.6	1238.0	1285.6	1313.0	1321.0	1287.3	1217.0	1124.3	1031.3
37.5°	984.7	984.7	1025.7	1061.0	1114.3	1181.6	1232.0	1244.6	1210.3	1124.0	1027.3
40°	810.7	809.7	842.0	885.3	942.3	1016.7	1091.7	1156.0	1164.3	1111.0	1013.3
42.5°	663.3	661.7	697.0	721.0	781.0	847.3	947.0	1038.0	1090.0	1070.7	992.7
45°	552.7	551.3	574.3	601.7	644.0	713.0	796.7	897.7	985.0	1011.7	954.0
47.5°	469.3	470.0	482.3	505.3	541.3	590.7	665.7	759.3	867.3	929.0	905.3
50°	398.0	400.3	409.7	427.0	453.3	493.0	557.3	642.0	753.0	834.7	839.7
52.5°	344.7	348.0	358.0	367.3	389.3	417.3	467.3	540.7	632.3	730.3	765.3
55°	300.0	301.7	307.3	317.3	333.7	357.0	393.3	449.3	534.3	621.7	683.3
57.5°	262.7	262.7	266.3	273.3	286.3	307.3	331.7	378.0	449.7	528.7	594.3
60°	225.3	226.7	229.3	237.0	245.7	261.7	285.3	314.7	376.7	442.7	513.3
62.5°	194.0	196.3	199.0	202.7	210.7	222.0	238.7	265.7	307.3	368.3	431.3
65°	165.3	167.7	168.0	172.3	177.7	187.0	199.7	219.3	254.0	302.0	354.0
67.5°	140.0	141.0	142.0	145.3	150.3	156.3	164.7	179.3	206.7	239.0	289.7
70°	117.3	118.0	118.3	122.0	124.3	129.7	134.0	143.3	160.7	185.7	225.0
72.5°	96.0	95.0	94.7	97.7	98.7	103.0	108.3	115.0	124.3	142.0	171.3
75°	75.3	75.7	76.0	77.7	78.0	80.0	83.3	87.7	92.0	102.3	121.0
77.5°	58.0	56.7	56.7	58.7	59.3	59.7	62.0	64.3	66.7	72.7	80.0
80°	39.3	40.0	40.0	40.0	40.3	41.0	42.3	44.3	46.0	49.7	51.0
82.5°	28.0	28.0	27.7	28.3	28.7	29.0	29.0	29.0	30.0	31.0	32.3
85°	17.3	17.7	16.7	17.3	17.7	17.7	17.7	17.7	18.7	18.3	18.7
87.5°	7.3	7.7	7.7	8.0	8.0	8.3	8.0	8.3	8.0	8.0	8.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	840.7	840.7	840.7	840.7	840.7	840.7	840.7	840.7	840.7	840.7	840.7
2.5°	868.3	864.3	862.3	858.3	853.0	849.7	846.3	841.7	838.0	832.3	827.3
5°	900.3	892.3	885.0	875.0	865.3	857.0	848.3	838.7	830.0	820.3	810.0
7.5°	936.0	923.3	908.0	890.3	875.3	862.3	847.7	833.3	820.3	805.0	791.0
10°	970.3	950.0	929.7	906.0	884.0	864.7	845.0	825.0	808.0	789.0	771.7
12.5°	997.0	977.7	947.3	918.0	889.3	864.3	839.7	815.3	793.0	772.0	751.3
15°	1020.3	988.3	962.7	930.7	895.7	861.7	831.0	802.7	775.7	751.0	730.0
17.5°	1027.0	998.3	970.3	933.0	895.3	856.7	821.3	787.7	757.7	730.3	706.7
20°	1026.3	997.3	967.0	931.3	891.3	849.0	809.7	772.0	738.0	706.7	681.3
22.5°	1016.3	988.3	957.7	921.7	881.0	837.3	796.0	754.3	717.3	684.7	658.7
25°	1005.7	970.3	938.3	902.0	863.3	823.0	779.0	734.0	695.3	661.3	632.0
27.5°	996.3	954.0	914.7	879.0	839.3	803.0	759.3	712.3	672.7	637.0	606.7
30°	981.3	936.7	889.0	850.0	811.7	773.7	733.7	691.0	647.7	611.3	581.0
32.5°	968.3	912.0	860.3	816.3	778.0	744.7	706.3	665.3	623.0	588.3	555.7
35°	954.0	886.7	832.7	781.0	742.7	706.3	676.0	639.0	597.0	560.3	531.0
37.5°	937.0	860.7	798.7	746.0	706.3	669.0	641.7	608.7	570.7	534.3	505.3
40°	918.0	834.0	762.7	708.3	665.7	628.3	605.3	576.0	543.7	507.7	480.7
42.5°	894.0	805.7	730.0	670.7	623.3	589.7	566.7	542.3	512.7	481.3	452.0
45°	863.7	770.3	691.0	628.3	581.7	549.0	525.0	507.0	483.3	454.0	426.3
47.5°	826.7	733.3	651.0	586.0	541.0	509.7	487.3	469.3	451.3	426.0	399.7
50°	777.7	691.0	612.0	545.7	498.0	467.7	447.7	433.3	417.0	396.3	372.3
52.5°	723.7	643.3	566.0	504.0	458.0	427.7	407.0	395.0	382.7	365.7	345.0
55°	661.0	595.7	522.0	461.3	416.3	386.3	370.0	358.3	348.0	335.0	317.7
57.5°	594.7	537.3	473.3	417.3	375.0	346.7	332.3	322.7	314.0	304.7	290.3
60°	525.0	484.3	423.7	372.3	335.3	312.0	298.3	289.3	281.3	273.7	263.0
62.5°	452.3	418.7	373.3	329.7	296.7	274.7	264.7	257.0	248.7	242.0	234.3
65°	378.7	359.3	328.0	287.0	256.7	238.7	229.0	222.7	218.7	211.0	205.0
67.5°	311.7	301.0	274.3	246.7	223.3	207.0	198.0	193.3	189.0	185.3	178.7
70°	248.0	240.3	225.0	205.3	187.0	173.0	166.3	165.0	159.0	155.3	152.0
72.5°	189.0	187.0	174.3	165.7	155.3	144.3	139.3	136.7	132.7	129.3	128.0
75°	134.3	137.3	133.3	129.0	124.0	115.0	110.7	109.3	105.7	104.7	103.0
77.5°	91.7	96.0	97.3	95.3	93.0	90.0	87.0	85.7	82.0	81.3	80.3
80°	57.7	64.0	66.3	66.0	65.0	65.3	61.7	61.3	59.7	58.7	59.7
82.5°	35.0	38.3	42.7	43.7	42.3	43.0	42.0	40.7	40.7	41.3	40.0
85°	19.0	19.3	21.3	22.7	24.3	25.7	24.3	24.7	24.3	24.3	23.3
87.5°	8.3	8.7	8.7	8.3	9.0	9.7	11.0	11.7	11.3	10.3	9.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	840.7	840.7	840.7	840.7	840.7	840.7	840.7	840.7	840.7	840.7	840.7
2.5°	823.3	821.0	817.0	813.7	806.0	800.7	800.0	800.3	799.7	799.0	798.7
5°	803.3	795.7	788.3	782.0	773.3	764.7	760.7	759.0	758.3	754.7	756.7
7.5°	782.0	770.3	761.7	749.7	739.3	732.0	725.0	721.7	721.0	716.0	714.7
10°	759.3	745.3	732.3	720.3	710.0	699.7	691.3	688.3	684.3	680.3	674.3
12.5°	737.0	719.7	705.3	692.0	678.0	666.3	659.7	655.3	650.3	646.7	644.7
15°	710.3	695.7	678.0	663.7	649.3	639.0	630.0	622.0	617.3	614.3	606.0
17.5°	686.3	667.0	650.3	636.7	621.0	609.3	600.0	593.3	585.3	579.3	574.0
20°	660.7	640.7	625.3	609.0	593.0	578.7	567.0	561.7	556.0	550.3	547.3
22.5°	633.0	615.7	598.3	581.3	564.3	549.0	541.7	534.0	529.0	523.3	519.3
25°	609.0	590.0	572.7	553.7	535.0	526.0	516.0	508.3	504.3	498.7	494.3
27.5°	583.3	565.0	544.3	524.7	513.7	498.3	491.7	485.7	480.3	474.7	471.7
30°	559.3	538.0	517.3	502.0	487.7	476.7	470.3	463.0	455.7	453.0	449.0
32.5°	534.0	511.0	493.0	477.7	465.7	452.3	446.3	440.3	433.3	430.0	426.3
35°	507.7	485.3	467.7	453.7	441.3	431.3	424.7	418.3	414.0	409.0	406.3
37.5°	480.0	460.7	443.7	429.7	418.3	410.3	402.0	397.0	391.0	386.3	384.3
40°	453.7	436.3	420.0	407.0	396.7	387.0	379.7	373.3	369.7	365.7	362.3
42.5°	430.0	412.0	398.0	384.3	375.0	365.7	358.3	353.7	347.3	345.7	341.0
45°	404.7	388.0	374.0	361.3	351.7	344.0	335.3	329.7	325.7	321.7	320.0
47.5°	379.0	363.7	350.7	339.0	329.0	320.3	313.7	307.7	303.3	299.7	297.7
50°	354.0	340.7	327.7	316.3	306.0	299.7	291.7	285.0	281.7	277.7	275.3
52.5°	327.7	316.7	302.7	293.0	283.3	275.0	267.0	262.7	259.3	256.0	254.3
55°	303.0	291.3	279.3	269.0	259.7	251.0	244.7	241.3	237.0	235.0	234.7
57.5°	277.7	265.7	255.7	246.3	235.7	229.0	223.3	219.3	215.7	214.0	214.0
60°	250.0	240.3	231.0	220.7	213.0	205.3	199.3	196.7	193.0	192.3	190.0
62.5°	224.7	215.7	206.7	197.0	190.0	182.3	178.0	174.3	172.3	169.7	167.0
65°	198.3	190.3	181.7	173.3	167.7	159.3	155.3	151.0	148.7	145.7	142.3
67.5°	173.0	165.3	157.3	149.7	145.0	137.0	134.3	129.0	127.3	124.0	121.0
70°	146.3	141.0	134.7	127.0	123.0	116.7	114.0	109.0	106.3	104.3	102.7
72.5°	123.3	118.3	111.0	106.0	101.0	97.0	92.7	90.3	88.0	86.3	86.0
75°	100.7	94.3	90.0	85.3	82.0	78.0	76.0	74.3	73.3	72.3	71.3
77.5°	77.0	74.3	70.0	65.3	62.7	61.0	59.7	59.0	58.0	57.7	56.7
80°	57.3	53.7	51.0	49.3	47.3	46.0	45.0	42.7	41.3	40.7	40.0
82.5°	38.0	37.0	35.0	33.3	31.7	31.3	30.3	29.7	29.3	29.3	29.0
85°	23.0	20.3	20.3	20.0	20.0	19.7	19.0	19.0	18.3	19.3	19.3
87.5°	9.3	9.3	8.7	8.7	9.0	8.3	8.0	8.0	8.0	7.7	8.0
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: P243774

CATALOG NUMBER: S125RDRP-H610D835-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	840.7	840.7	840.7	840.7
2.5°	798.7	797.0	797.3	795.3
5°	753.0	752.0	748.7	746.0
7.5°	711.3	707.0	706.7	704.0
10°	672.3	668.3	666.3	666.7
12.5°	638.3	634.0	634.0	631.3
15°	602.0	597.7	598.3	598.0
17.5°	572.0	569.0	566.7	564.7
20°	542.7	539.0	537.7	536.0
22.5°	515.7	513.0	513.3	513.3
25°	490.0	490.3	487.3	486.7
27.5°	467.3	466.7	466.0	464.7
30°	446.0	443.3	442.7	441.3
32.5°	424.0	423.7	421.0	422.0
35°	401.7	400.7	400.0	399.3
37.5°	381.0	379.0	378.7	378.0
40°	360.0	359.3	356.3	358.0
42.5°	337.3	336.0	336.0	336.0
45°	318.3	314.7	314.7	313.3
47.5°	297.0	295.7	295.0	292.7
50°	276.0	274.0	273.3	273.3
52.5°	254.3	254.0	254.7	253.3
55°	235.3	235.7	235.3	234.7
57.5°	214.7	213.0	213.0	213.3
60°	190.0	190.0	190.7	189.3
62.5°	166.3	165.7	163.3	162.7
65°	142.0	139.3	139.0	139.3
67.5°	120.3	119.3	117.7	118.0
70°	101.7	101.3	99.7	98.7
72.5°	85.0	85.0	84.0	84.0
75°	71.0	70.3	70.0	70.7
77.5°	54.7	53.0	53.7	52.7
80°	39.7	40.3	39.7	39.3
82.5°	29.3	28.7	29.0	28.7
85°	18.7	18.0	18.3	18.0
87.5°	7.7	8.0	8.0	7.3
90°	0.0	0.0	0.0	0.0



TEST NUMBER: P243774
 CATALOG NUMBER: S125RDRP-H610D835-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	16.13	17.67	16.50	17.99	18.30	16.83	18.37	17.20	18.68	19.00
	3H	17.21	18.60	17.59	18.92	19.29	18.31	19.69	18.68	20.02	20.38
	4H	17.57	18.87	17.97	19.22	19.59	18.83	20.13	19.23	20.48	20.85
	6H	17.79	18.99	18.20	19.35	19.75	19.19	20.38	19.60	20.75	21.14
	8H	17.85	18.99	18.27	19.38	19.78	19.29	20.43	19.71	20.82	21.22
	12H	17.88	18.97	18.31	19.36	19.78	19.35	20.44	19.78	20.82	21.25
4H	2H	17.65	18.95	18.05	19.30	19.67	17.70	19.00	18.10	19.35	19.72
	3H	18.70	19.77	19.11	20.17	20.57	19.36	20.44	19.77	20.84	21.24
	4H	19.06	20.03	19.49	20.44	20.88	19.96	20.93	20.39	21.34	21.78
	6H	19.30	20.14	19.76	20.59	21.05	20.40	21.24	20.85	21.68	22.14
	8H	19.37	20.15	19.83	20.60	21.06	20.52	21.30	20.98	21.75	22.22
	12H	19.41	20.11	19.90	20.59	21.06	20.60	21.30	21.09	21.78	22.25
8H	4H	19.42	20.21	19.88	20.65	21.12	20.11	20.90	20.58	21.34	21.81
	6H	19.71	20.36	20.21	20.85	21.33	20.64	21.29	21.13	21.78	22.25
	8H	19.81	20.39	20.32	20.90	21.39	20.81	21.40	21.33	21.91	22.39
	12H	19.89	20.41	20.40	20.90	21.46	20.95	21.47	21.46	21.96	22.52
12H	4H	19.44	20.15	19.93	20.62	21.09	20.11	20.81	20.59	21.28	21.76
	6H	19.74	20.33	20.26	20.84	21.32	20.63	21.21	21.14	21.72	22.21
	8H	19.88	20.39	20.39	20.89	21.45	20.85	21.36	21.36	21.85	22.42