

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: P242924

Luminaire Tested: S125RDRP-S610D930-X4F0-XX-UDD-A-W

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-2024  
Report Number: P242924  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-32)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S125RDRP-S610D930-X4F0-XX-UDD-A-W  
Description: DEFINE 5 REGRESSED DIRECT RECESSED WITH ASYMMETRIC FLUSH DIFFUSER  
STANDARD LIGHT ENGINE  
Light Source: (92) 3000K CCT, 90 CRI LEDS  
Ballast/Driver: -

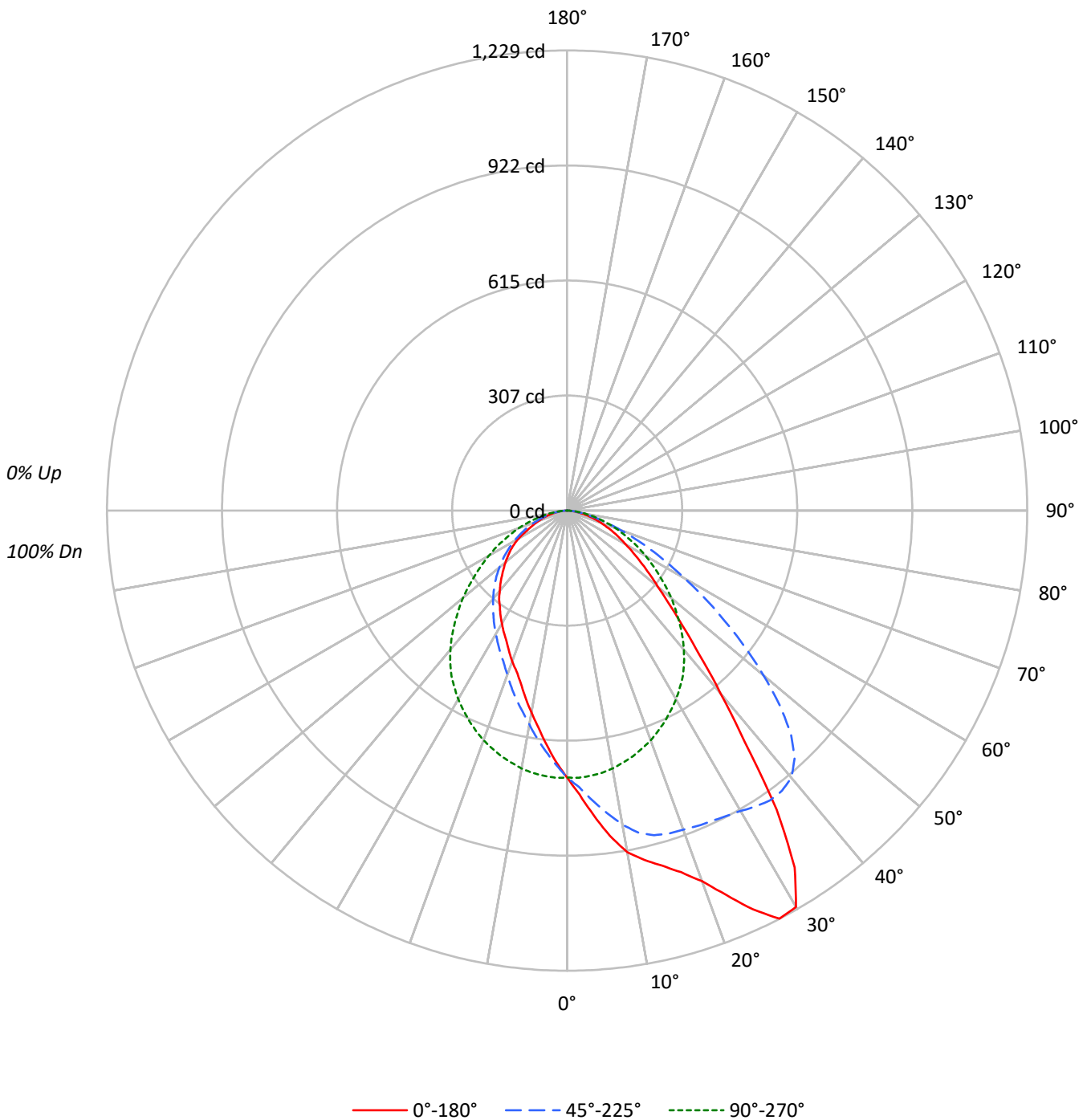
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1847.3 lumens  
Efficiency: N/A  
Efficacy: 98.3 lumens/watt  
Spacing Criteria (0/90/45): 1.4 / 1.21 / 1.48  
Luminous Opening: Rectangular (W 3.88' x L: 0.39' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 18.8  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): 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	69	78	72	67	76	70	66	73	69	65	63				63
4	85	74	66	59	83	73	65	59	70	63	58	68	62	57	66	61	57	55				55
5	79	66	58	52	77	65	57	51	63	56	51	61	55	50	60	54	50	48				48
6	73	60	52	45	71	59	51	45	57	50	45	56	49	44	54	49	44	42				42
7	68	55	46	40	66	54	46	40	52	45	40	51	44	40	50	44	39	37				37
8	63	50	42	36	61	49	42	36	48	41	36	47	40	36	46	40	35	34				34
9	59	46	38	33	58	45	38	33	44	37	32	43	37	32	42	36	32	30				30
10	55	42	35	30	54	42	35	30	41	34	30	40	34	29	39	33	29	28				28

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°	135°	180°
0°	5068	5068	5068	5068	5068
5°	5830	5542	5074	4610	4481
10°	6687	6147	5048	4191	3954
15°	7223	6605	4996	3848	3515
20°	7965	6858	4937	3533	3245
25°	9218	7172	4857	3303	3011
30°	10031	7604	4773	3120	2858
35°	8461	8198	4675	2976	2717
40°	5909	8641	4500	2851	2596
45°	4383	8502	4263	2733	2477
50°	3495	7576	4016	2605	2375
55°	2966	6362	3710	2473	2285
60°	2563	5154	3437	2321	2138
65°	2284	4115	3140	2151	1842
70°	2007	3157	2876	1953	1679
75°	1736	2356	2491	1736	1576
80°	1318	1690	2096	1547	1318
85°	1101	1191	1647	1313	1240

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 8502 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	68.4	3.7
10°-20°	200.4	10.9
20°-30°	317.8	17.2
30°-40°	384.1	20.8
40°-50°	342.0	18.5
50°-60°	262.2	14.2
60°-70°	170.3	9.2
70°-80°	82.6	4.5
80°-90°	19.4	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°	586.6	31.8
0°-40°	970.7	52.5
0°-60°	1574.9	85.3
0°-90°	1847.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1847.3	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	713	713	713	713	713	
5°	817	777	711	646	628	81
15°	982	898	679	523	478	281
25°	1175	915	619	421	384	541
35°	975	945	539	343	313	591
45°	436	846	424	272	246	346
55°	239	513	299	200	184	217
65°	136	245	187	128	110	135
75°	63	86	91	63	57	67
85°	14	15	20	16	15	16
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°	713.0	713.0	713.0	713.0	713.0	713.0	713.0	713.0	713.0	713.0	713.0
2.5°	759.2	758.6	759.8	756.6	756.9	751.9	751.9	748.1	743.1	739.3	737.6
5°	817.2	817.8	816.6	812.2	809.3	804.9	799.9	791.1	783.8	776.8	771.2
7.5°	876.3	876.9	873.1	872.2	864.6	859.9	848.8	837.4	827.4	814.3	804.9
10°	926.6	926.3	922.3	919.0	912.6	904.4	893.6	879.5	866.3	851.7	837.7
12.5°	955.9	955.0	954.4	950.4	944.5	937.5	928.7	914.9	898.0	881.6	864.6
15°	981.7	979.6	975.8	970.8	962.4	953.9	943.6	931.3	915.8	897.7	882.4
17.5°	1012.7	1013.0	1007.1	1001.9	990.7	976.7	961.5	942.7	922.8	904.4	889.2
20°	1053.1	1052.2	1046.4	1032.9	1019.7	1001.0	982.8	958.5	932.8	906.7	886.5
22.5°	1111.0	1108.4	1102.3	1083.5	1061.3	1035.8	1005.7	974.6	942.2	911.7	883.6
25°	1175.4	1173.7	1161.7	1141.2	1112.5	1075.3	1039.0	998.4	953.6	914.6	882.4
27.5°	1228.7	1225.2	1214.4	1195.0	1166.9	1126.8	1076.8	1024.1	970.8	919.6	875.4
30°	1222.3	1226.6	1225.5	1217.6	1197.7	1162.5	1117.2	1056.0	989.6	926.6	871.3
32.5°	1130.4	1134.2	1147.3	1168.7	1175.1	1166.4	1135.3	1080.0	1010.6	936.9	868.1
35°	975.2	980.5	1000.4	1031.7	1072.7	1106.9	1114.0	1083.5	1021.8	944.8	864.9
37.5°	778.0	812.2	825.7	857.6	922.0	984.3	1038.4	1050.7	1017.4	943.0	861.1
40°	636.9	643.9	673.8	710.9	763.0	828.6	914.9	977.3	979.3	931.3	848.8
42.5°	522.2	531.5	549.7	577.5	620.2	685.8	775.6	862.8	910.0	899.1	832.7
45°	436.1	442.8	457.8	480.6	514.8	569.0	645.7	740.8	816.3	845.9	801.4
47.5°	368.8	372.3	386.1	404.5	430.8	471.8	534.2	620.2	710.1	770.1	758.3
50°	316.1	320.2	330.1	343.3	364.7	398.1	445.5	514.2	607.6	685.2	700.7
52.5°	275.1	278.3	283.6	295.9	312.6	336.3	372.3	432.9	514.5	598.2	639.2
55°	239.4	241.8	246.7	253.8	267.8	286.2	319.3	362.3	430.2	513.4	566.1
57.5°	209.0	210.1	213.1	220.1	230.3	244.1	269.3	308.5	357.7	435.8	493.8
60°	180.3	181.5	185.6	190.0	197.6	209.9	228.6	254.1	300.9	362.6	421.5
62.5°	157.5	158.1	159.2	163.6	170.1	178.8	192.6	212.2	247.0	299.4	354.1
65°	135.8	136.1	136.7	140.2	144.3	151.3	161.0	175.6	203.7	244.7	293.9
67.5°	114.1	114.7	116.8	118.0	122.9	126.4	132.6	144.3	166.0	195.2	235.0
70°	96.6	96.3	98.3	99.8	101.3	105.7	109.5	118.5	130.8	151.9	183.8
72.5°	80.2	79.3	79.9	80.2	82.2	84.9	88.7	93.4	102.1	115.0	137.6
75°	63.2	63.5	63.5	64.1	65.6	66.7	67.9	70.8	76.1	85.8	98.9
77.5°	47.4	46.8	48.3	48.3	49.5	50.9	51.8	53.0	55.0	59.4	67.3
80°	32.2	32.2	32.5	33.4	33.1	33.7	35.1	36.3	38.9	41.3	43.6
82.5°	22.8	22.5	22.8	22.8	22.8	23.4	23.7	23.7	24.3	25.2	26.6
85°	13.5	13.5	13.8	13.8	14.0	14.0	14.3	14.3	14.3	14.6	14.9
87.5°	6.4	6.1	5.9	5.9	6.1	6.7	6.4	6.1	6.1	6.1	6.4
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°	713.0	713.0	713.0	713.0	713.0	713.0	713.0	713.0	713.0	713.0	713.0
2.5°	737.6	735.5	731.7	728.2	723.8	720.0	717.4	714.2	710.1	705.1	701.0
5°	765.1	758.6	750.2	742.8	733.5	726.2	718.5	711.2	703.9	694.5	686.3
7.5°	795.5	782.9	771.2	756.0	742.3	730.3	718.5	706.5	695.1	682.3	670.2
10°	823.0	806.9	789.1	768.6	749.9	732.0	715.6	699.5	682.5	667.6	651.5
12.5°	848.8	826.8	805.8	778.5	755.1	732.3	710.3	689.3	670.8	650.3	632.8
15°	862.3	841.8	818.9	787.3	756.0	729.7	705.1	679.0	656.5	634.8	615.5
17.5°	870.2	848.5	822.2	791.4	757.8	725.0	694.0	666.2	640.4	615.5	594.2
20°	866.6	845.9	818.6	789.7	753.1	718.5	684.3	652.7	623.1	596.5	573.4
22.5°	858.2	836.5	810.4	779.4	745.2	708.0	670.8	636.6	605.3	577.5	551.7
25°	849.7	820.4	793.5	763.6	730.5	694.3	656.5	619.3	586.2	558.2	530.6
27.5°	841.5	806.1	772.7	744.0	708.6	675.8	638.9	600.6	566.1	537.7	509.6
30°	829.5	788.5	750.7	717.1	684.0	653.3	618.7	581.6	545.9	516.3	487.6
32.5°	814.5	770.3	727.9	687.8	656.2	625.8	595.3	560.2	525.7	494.9	465.7
35°	802.5	746.9	701.9	660.6	625.2	595.6	567.5	538.8	504.0	472.4	444.0
37.5°	785.9	724.7	673.8	628.7	591.8	562.5	540.0	512.8	480.3	449.6	423.2
40°	770.9	700.1	643.0	598.5	559.3	528.0	507.2	485.0	456.0	427.6	401.3
42.5°	751.0	677.6	612.0	565.2	525.7	495.8	474.7	456.0	432.9	406.5	377.9
45°	723.8	647.1	580.1	530.3	490.5	461.0	441.4	424.1	405.7	381.1	356.5
47.5°	691.3	618.2	547.6	492.9	454.5	426.7	407.4	393.1	379.6	358.2	333.4
50°	650.6	580.7	512.2	459.5	418.0	391.9	374.1	363.2	351.2	332.2	312.3
52.5°	602.6	542.1	475.3	421.2	382.5	358.5	341.6	330.7	321.4	306.7	288.0
55°	551.7	497.0	435.5	386.6	350.6	326.1	309.7	299.4	293.6	280.4	265.5
57.5°	494.1	451.9	396.3	348.6	316.1	291.5	279.2	270.1	263.4	253.8	242.6
60°	433.2	405.7	357.1	312.3	283.0	259.9	249.1	241.8	235.6	227.7	219.5
62.5°	371.4	353.3	312.6	275.7	249.4	230.9	221.0	214.5	207.2	202.5	194.6
65°	317.6	299.7	270.4	240.3	215.4	199.9	192.6	186.7	182.3	176.5	170.9
67.5°	257.9	249.7	228.0	205.5	187.3	172.4	166.0	161.3	156.3	152.8	148.7
70°	203.7	200.2	185.9	172.1	155.4	146.1	140.2	138.4	132.0	128.5	125.9
72.5°	155.7	154.5	147.8	139.3	128.8	120.9	115.6	113.6	110.0	107.4	106.0
75°	113.3	113.9	112.4	106.2	101.9	96.6	91.9	90.7	87.8	85.5	84.0
77.5°	77.3	80.2	79.6	79.3	77.3	73.5	71.4	70.5	67.3	66.4	66.1
80°	49.2	52.4	55.3	55.0	54.4	53.6	52.1	51.2	49.8	48.9	48.3
82.5°	28.7	31.6	34.0	36.0	36.0	35.1	34.2	34.0	34.0	33.4	33.4
85°	15.5	16.1	17.0	19.0	20.5	20.8	20.5	20.2	19.3	19.6	19.9
87.5°	6.7	6.7	7.0	7.0	6.7	8.2	9.1	9.4	8.8	8.2	7.6
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°	713.0	713.0	713.0	713.0	713.0	713.0	713.0	713.0	713.0	713.0	713.0
2.5°	698.1	694.0	691.0	685.2	681.1	679.3	676.1	675.2	678.4	676.1	675.8
5°	680.2	671.7	665.0	658.2	650.9	646.2	639.2	638.1	636.3	633.7	633.1
7.5°	659.4	648.9	641.0	629.9	620.8	613.5	604.7	601.2	599.4	596.2	590.9
10°	638.3	625.2	613.5	602.3	590.3	580.7	571.9	565.2	560.8	556.7	554.9
12.5°	617.6	604.1	588.3	574.2	560.5	549.4	539.4	535.6	530.6	525.7	521.0
15°	595.9	578.1	561.7	546.2	534.7	523.0	513.7	507.2	499.9	497.9	490.0
17.5°	572.8	556.1	536.8	520.1	507.2	494.9	484.7	477.1	471.5	463.6	459.8
20°	551.4	530.6	511.9	497.0	482.3	467.1	456.6	450.4	445.2	439.0	436.1
22.5°	528.6	508.4	489.1	470.9	456.0	441.1	434.3	427.9	421.8	416.2	412.1
25°	506.3	485.9	465.7	447.5	432.0	421.2	412.4	405.1	401.9	396.3	392.2
27.5°	484.1	462.4	442.0	422.9	410.9	400.1	393.1	387.2	381.1	376.1	372.3
30°	462.7	440.5	417.7	403.3	390.4	380.2	372.3	366.7	362.3	358.0	355.3
32.5°	441.4	418.2	398.6	382.8	370.8	362.3	354.1	348.9	344.2	339.2	336.0
35°	418.2	394.8	378.4	363.2	351.2	343.0	337.5	329.9	326.1	322.5	319.3
37.5°	397.5	375.2	357.1	343.9	332.8	324.9	317.6	313.8	308.8	305.9	303.2
40°	374.1	354.1	338.1	324.0	316.4	307.3	300.6	295.3	291.8	287.7	284.8
42.5°	353.0	334.8	319.3	307.0	297.1	289.8	283.3	278.1	273.4	270.7	268.4
45°	333.4	314.9	299.7	288.0	279.2	271.9	265.2	262.5	256.7	253.2	252.0
47.5°	312.9	296.2	281.3	270.4	261.4	254.6	248.2	242.3	239.4	235.9	234.1
50°	292.1	276.3	262.5	252.0	243.2	235.6	229.8	226.2	221.9	218.6	216.3
52.5°	271.3	257.0	243.2	233.3	226.0	218.3	211.6	208.1	204.0	202.2	200.8
55°	251.7	236.2	224.5	214.5	206.6	199.6	193.5	190.0	187.3	185.3	184.7
57.5°	229.2	216.6	205.5	196.7	188.2	181.5	175.9	172.7	170.3	170.1	168.0
60°	207.2	196.1	186.1	176.5	169.5	163.3	158.6	154.8	152.5	152.2	151.6
62.5°	185.3	174.7	165.7	157.5	151.3	145.5	141.1	136.7	135.5	133.8	132.3
65°	163.6	154.0	146.3	139.6	132.9	127.9	123.5	120.9	117.7	115.9	112.7
67.5°	142.2	134.3	127.0	121.5	115.9	110.9	107.1	103.3	101.0	99.5	96.9
70°	121.2	115.3	108.0	101.9	97.8	94.0	91.0	86.6	85.2	84.0	82.8
72.5°	101.3	96.3	90.4	85.8	81.7	78.1	74.6	73.2	71.7	70.5	70.0
75°	82.8	77.9	72.6	69.1	66.1	63.2	61.5	60.0	59.4	59.1	58.0
77.5°	64.4	61.5	57.1	53.9	51.8	50.6	48.9	48.3	48.6	47.1	46.8
80°	46.5	45.1	41.6	40.4	38.9	37.8	36.9	35.4	34.0	33.4	32.5
82.5°	31.6	30.1	29.3	27.2	26.0	25.5	24.6	24.3	24.9	24.0	23.7
85°	18.4	17.0	16.4	16.1	15.5	16.1	15.8	15.5	15.2	14.9	15.2
87.5°	7.3	7.3	7.0	7.6	6.7	7.0	7.0	6.7	6.7	6.7	6.4
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: P242924

CATALOG NUMBER: S125RDRP-S610D930-X4F0-XX-UDD-A-W

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
0°	713.0	713.0	713.0	713.0
2.5°	675.5	672.3	671.4	672.6
5°	630.2	627.2	628.7	628.1
7.5°	591.8	588.0	583.6	584.8
10°	551.1	548.2	546.4	547.9
12.5°	516.9	515.4	514.0	512.8
15°	486.4	482.9	481.5	477.7
17.5°	457.2	456.0	452.2	449.6
20°	431.7	430.5	426.7	429.1
22.5°	410.6	407.7	407.1	405.7
25°	391.0	387.2	385.8	384.0
27.5°	371.1	369.1	367.0	366.4
30°	351.8	349.8	348.3	348.3
32.5°	334.5	333.1	331.6	331.3
35°	317.9	315.5	314.9	313.2
37.5°	300.3	298.2	298.2	298.5
40°	283.6	282.1	281.9	279.8
42.5°	265.8	265.2	264.0	263.4
45°	250.0	247.9	247.9	246.4
47.5°	233.3	231.5	231.8	230.1
50°	216.6	215.7	215.4	214.8
52.5°	199.9	199.6	201.1	199.6
55°	185.3	184.4	186.1	184.4
57.5°	168.0	167.4	169.2	168.0
60°	151.0	149.3	150.1	150.4
62.5°	130.8	130.0	130.5	128.8
65°	112.1	111.2	110.0	109.5
67.5°	97.5	94.8	94.8	95.4
70°	81.1	81.1	80.8	80.8
72.5°	69.7	69.4	68.8	68.5
75°	58.0	58.2	57.7	57.4
77.5°	45.4	43.9	44.5	43.9
80°	32.5	32.2	33.1	32.2
82.5°	24.0	23.7	24.0	23.4
85°	15.5	15.2	14.9	15.2
87.5°	6.7	6.4	6.4	6.4
90°	0.0	0.0	0.0	0.0



TEST NUMBER: P242924  
 CATALOG NUMBER: S125RDRP-S610D930-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	15.26	16.80	15.63	17.11	17.42	16.24	17.78	16.61	18.09	18.40
	3H	16.39	17.77	16.77	18.09	18.46	17.72	19.10	18.10	19.42	19.79
	4H	16.77	18.07	17.17	18.41	18.79	18.23	19.52	18.63	19.87	20.25
	6H	17.01	18.20	17.42	18.56	18.96	18.58	19.77	18.99	20.14	20.53
	8H	17.06	18.20	17.49	18.59	18.99	18.68	19.81	19.10	20.20	20.60
	12H	17.10	18.18	17.53	18.56	18.99	18.73	19.82	19.16	20.20	20.63
4H	2H	16.85	18.14	17.25	18.49	18.87	17.09	18.38	17.49	18.73	19.11
	3H	17.92	18.99	18.33	19.39	19.79	18.75	19.82	19.16	20.22	20.62
	4H	18.30	19.26	18.73	19.68	20.12	19.34	20.30	19.77	20.72	21.15
	6H	18.56	19.39	19.01	19.84	20.30	19.77	20.60	20.22	21.04	21.50
	8H	18.62	19.40	19.08	19.85	20.31	19.89	20.67	20.35	21.11	21.58
	12H	18.66	19.36	19.15	19.84	20.31	19.97	20.67	20.45	21.15	21.62
8H	4H	18.68	19.46	19.14	19.90	20.37	19.49	20.27	19.95	20.71	21.18
	6H	18.98	19.63	19.48	20.12	20.59	20.00	20.65	20.50	21.14	21.62
	8H	19.07	19.65	19.59	20.16	20.65	20.18	20.76	20.69	21.27	21.75
	12H	19.15	19.67	19.66	20.16	20.72	20.31	20.83	20.82	21.32	21.88
12H	4H	18.70	19.40	19.18	19.88	20.35	19.48	20.17	19.96	20.65	21.12
	6H	19.01	19.59	19.53	20.10	20.59	19.99	20.57	20.51	21.08	21.57
	8H	19.15	19.66	19.66	20.15	20.71	20.21	20.72	20.72	21.21	21.78