

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: P242801

Luminaire Tested: S125DRP-S610D927-X4F0-XX-UDD-A-W

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-2024  
Report Number: P242801  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-22)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S125DRP-S610D927-X4F0-XX-UDD-A-W  
Description: DEFINE 5 DIRECT RECESSED WITH ASYMMETRIC FLUSH DIFFUSER  
STANDARD LIGHT ENGINE  
Light Source: (92) 2700K CCT, 90 CRI LEDS  
Ballast/Driver: -

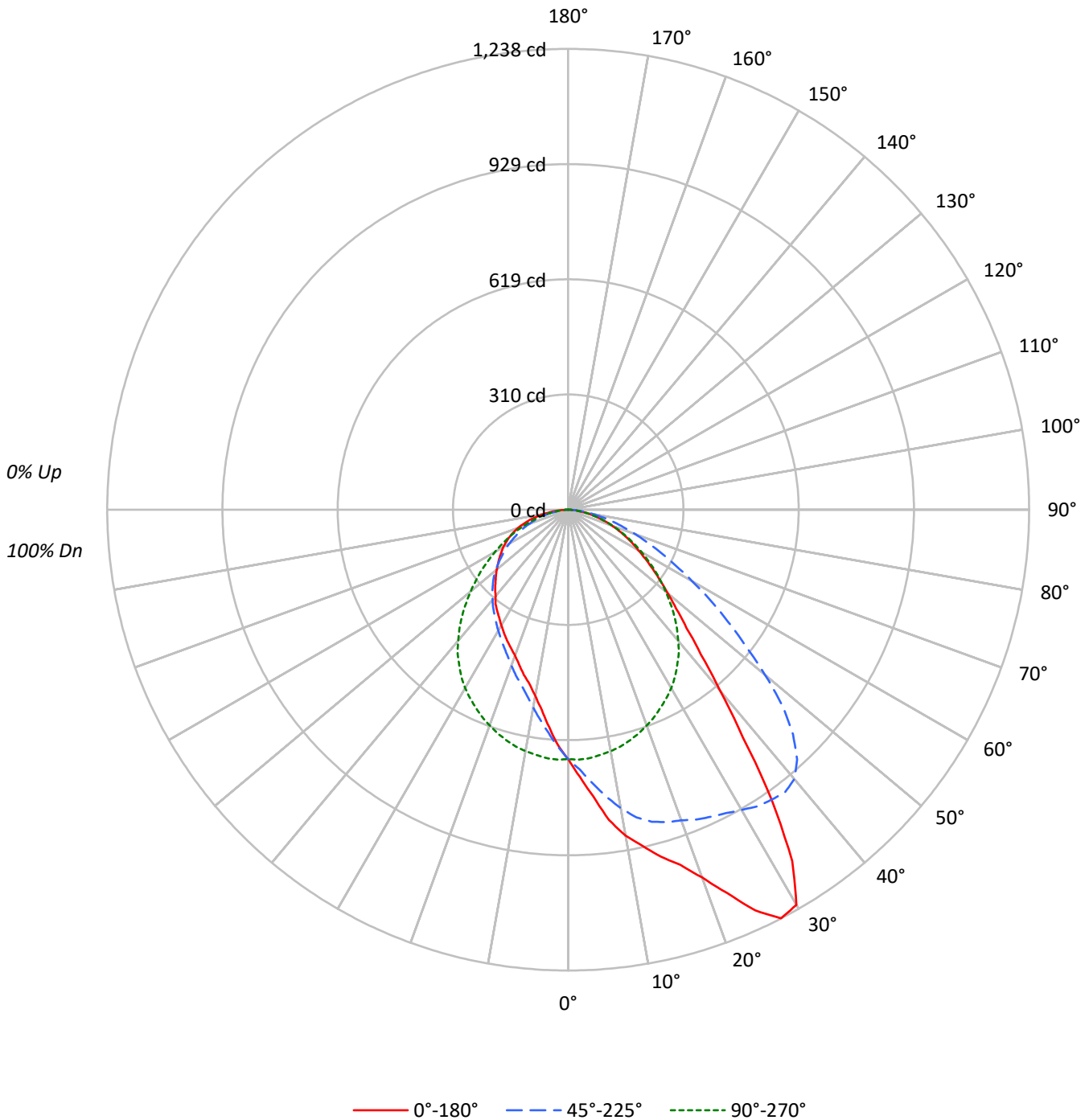
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1890.8 lumens  
Efficiency: N/A  
Efficacy: 100.6 lumens/watt  
Spacing Criteria (0/90/45): 1.43 / 1.23 / 1.53  
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	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	109	105	101	97	107	103	99	96	99	96	93	95	92	90	91	89	87	85					85			
2	100	92	86	80	98	90	84	79	87	82	78	84	80	76	81	77	74	72					72			
3	92	82	74	68	89	80	73	67	77	71	66	74	69	65	72	67	64	61					61			
4	84	73	64	58	82	71	63	57	69	62	57	67	61	56	64	59	55	53					53			
5	78	65	56	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46					46			
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41					41			
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36					36			
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32					32			
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29					29			
10	54	41	34	28	53	41	33	28	40	33	28	39	33	28	38	32	28	26					26			

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

	0°	45°	90°	135°	180°
0°	4762	4762	4762	4762	4762
5°	5515	5253	4778	4297	4184
10°	6416	5874	4753	3894	3666
15°	7102	6385	4719	3578	3382
20°	7950	6716	4664	3370	3153
25°	9313	7135	4601	3196	3042
30°	10059	7641	4539	3078	2945
35°	8271	8254	4424	2998	2882
40°	5879	8765	4264	2932	2813
45°	4516	8579	4048	2873	2773
50°	3856	7632	3779	2802	2768
55°	3432	6481	3517	2699	2791
60°	3096	5474	3230	2603	2861
65°	2861	4663	2941	2472	2936
70°	2600	3965	2641	2305	2978
75°	2296	3389	2326	2125	2952
80°	1932	2783	1899	1805	2701
85°	1533	2014	1370	1484	2177

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 8579 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	64.5	3.4
10°-20°	192.1	10.2
20°-30°	312.0	16.5
30°-40°	381.3	20.2
40°-50°	345.9	18.3
50°-60°	275.5	14.6
60°-70°	191.9	10.1
70°-80°	102.2	5.4
80°-90°	25.4	1.3
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°	568.6	30.1
0°-40°	949.9	50.2
0°-60°	1571.3	83.1
0°-90°	1890.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1890.8	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	670	670	670	670	670	
5°	773	736	670	602	586	78
15°	965	868	641	486	460	276
25°	1188	910	587	408	388	544
35°	953	951	510	346	332	585
45°	449	854	403	286	276	358
55°	277	523	284	218	225	249
65°	170	277	175	147	175	169
75°	84	123	85	77	108	90
85°	19	25	17	18	27	22
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°	670.0	670.0	670.0	670.0	670.0	670.0	670.0	670.0	670.0	670.0	670.0
2.5°	718.4	717.2	716.1	713.8	715.5	710.7	708.4	704.4	699.6	697.9	695.9
5°	773.0	774.4	775.8	769.8	770.4	766.4	757.3	749.9	744.0	736.3	730.9
7.5°	840.7	836.4	836.7	833.0	826.4	821.0	812.2	800.0	788.9	776.4	765.6
10°	889.0	889.3	886.7	882.2	875.1	870.0	857.4	845.5	831.0	813.9	801.7
12.5°	925.4	926.8	923.4	916.9	914.3	901.2	892.1	877.3	859.4	846.6	826.4
15°	965.2	962.1	959.8	952.1	946.2	934.2	918.6	903.8	885.0	867.7	850.3
17.5°	1000.5	1003.0	999.3	993.7	976.0	962.1	942.8	924.0	901.5	879.9	859.7
20°	1051.1	1053.4	1046.8	1034.6	1012.4	998.5	970.9	944.7	917.7	887.9	865.1
22.5°	1114.2	1111.4	1102.0	1081.8	1063.3	1034.6	1004.2	970.9	935.4	900.7	868.5
25°	1187.6	1175.7	1170.3	1147.2	1121.9	1084.1	1043.1	996.5	954.4	909.8	871.1
27.5°	1237.7	1232.8	1225.2	1206.4	1177.4	1134.4	1086.1	1030.3	973.8	919.1	870.5
30°	1225.7	1226.3	1226.9	1221.7	1204.7	1174.2	1126.2	1065.0	994.5	931.1	872.5
32.5°	1119.9	1132.7	1145.0	1160.9	1171.1	1171.4	1145.8	1092.1	1019.0	944.7	871.4
35°	953.3	956.4	988.5	1020.4	1063.6	1097.2	1119.6	1095.2	1034.0	951.3	870.5
37.5°	770.7	786.3	810.5	846.3	911.2	964.1	1033.5	1057.4	1028.6	956.7	870.2
40°	633.6	647.8	662.3	699.0	751.6	819.3	900.9	970.6	986.8	944.7	861.7
42.5°	527.8	538.4	554.8	580.2	622.0	680.0	757.0	853.5	919.4	910.0	843.8
45°	449.3	456.4	469.0	490.9	522.7	569.6	638.5	738.0	824.7	853.5	813.4
47.5°	393.6	393.9	404.1	419.8	443.9	487.2	538.6	620.5	714.1	780.4	771.0
50°	348.7	347.2	354.9	368.0	386.2	412.7	461.3	523.6	612.6	690.2	711.8
52.5°	310.0	310.6	314.5	323.4	337.9	359.5	392.7	447.3	520.2	600.3	645.9
55°	277.0	275.9	281.3	287.8	298.9	313.7	339.8	382.8	444.5	523.0	575.9
57.5°	245.1	248.3	250.5	255.1	264.8	275.0	298.3	331.3	382.2	451.9	507.9
60°	217.8	221.0	222.7	227.2	234.6	243.2	260.2	285.8	327.0	385.1	440.5
62.5°	193.4	195.7	195.9	199.9	205.6	213.9	226.4	246.9	277.3	326.2	380.2
65°	170.1	170.1	171.2	175.5	178.3	185.7	195.9	211.6	237.8	277.3	323.6
67.5°	147.3	148.7	148.5	150.4	153.0	159.3	166.9	180.0	200.8	230.6	269.0
70°	125.1	126.3	126.0	127.4	130.3	133.9	139.9	152.1	166.1	190.8	222.7
72.5°	105.2	105.5	104.7	106.6	108.1	111.2	118.0	123.1	135.9	155.8	180.6
75°	83.6	84.2	84.7	85.9	87.6	89.3	92.7	99.3	107.8	123.4	140.2
77.5°	66.5	65.1	66.8	66.5	67.4	68.8	72.0	75.6	83.0	93.6	107.5
80°	47.2	47.5	47.5	47.8	49.2	50.1	52.6	55.2	60.6	68.0	77.1
82.5°	31.3	32.1	31.6	32.1	33.3	33.8	35.0	37.0	39.5	44.9	50.9
85°	18.8	17.3	17.9	18.5	18.5	18.8	19.9	20.8	22.5	24.7	27.3
87.5°	6.8	7.4	7.7	7.7	8.0	8.0	9.1	9.1	10.0	10.8	11.9
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°	670.0	670.0	670.0	670.0	670.0	670.0	670.0	670.0	670.0	670.0	670.0
2.5°	694.2	692.2	689.9	685.9	681.1	678.6	674.6	672.0	666.9	662.6	658.1
5°	724.3	716.9	710.1	701.3	691.6	685.4	678.0	669.7	661.2	652.4	642.7
7.5°	754.5	742.3	728.9	715.0	701.3	688.5	676.6	664.3	653.2	639.3	627.6
10°	784.9	768.4	750.8	730.0	709.8	692.2	674.3	658.6	642.7	625.7	610.6
12.5°	815.3	792.0	765.3	742.0	716.7	694.5	672.6	651.5	630.5	611.2	593.0
15°	826.4	807.1	784.1	751.6	724.3	695.1	667.2	641.3	617.1	596.1	573.9
17.5°	837.2	812.5	788.0	756.8	721.2	689.6	658.1	629.9	603.2	576.7	556.6
20°	839.8	814.2	788.3	757.9	721.2	683.7	652.1	616.6	587.3	559.7	533.5
22.5°	839.0	809.1	780.4	748.8	713.3	679.4	639.6	603.2	570.8	543.8	516.2
25°	832.7	801.7	766.4	734.9	699.6	662.9	624.2	586.7	554.3	523.3	496.3
27.5°	829.0	789.8	751.1	714.7	680.8	647.0	609.4	570.8	535.2	503.7	478.6
30°	820.8	776.7	731.7	693.3	658.4	625.7	590.7	553.1	515.6	484.9	457.6
32.5°	813.4	760.2	712.1	669.5	631.9	600.3	568.8	533.5	496.8	465.5	438.2
35°	803.4	744.0	689.6	642.4	602.9	570.2	543.2	509.9	476.1	445.9	419.8
37.5°	791.7	722.9	665.5	616.3	573.3	539.2	513.6	487.7	453.9	424.3	401.0
40°	777.5	700.2	638.5	587.8	542.9	507.1	483.7	459.6	432.6	405.5	380.5
42.5°	759.6	679.7	611.2	555.7	511.3	476.6	451.9	432.3	409.2	384.5	361.7
45°	736.9	654.1	581.3	522.7	477.8	443.4	418.1	402.7	384.8	360.9	341.3
47.5°	706.7	625.1	550.0	489.4	443.1	411.2	387.1	372.0	358.9	340.1	321.6
50°	663.8	591.8	515.6	455.6	409.2	377.1	355.2	341.8	331.0	317.4	302.3
52.5°	615.7	550.0	481.8	422.6	376.8	345.2	323.9	312.5	304.0	295.2	280.4
55°	564.2	507.4	442.5	386.2	343.8	312.8	294.1	283.8	276.4	269.0	259.9
57.5°	508.8	462.7	403.3	350.7	311.4	282.4	264.8	254.2	248.3	244.3	238.6
60°	449.6	411.5	362.0	315.1	277.0	252.0	234.9	227.2	222.4	219.3	215.3
62.5°	394.7	365.2	320.2	278.4	246.3	223.0	208.2	200.8	196.2	195.1	192.0
65°	341.0	316.8	279.0	243.4	215.0	194.8	182.0	174.9	172.1	170.3	170.6
67.5°	286.9	271.3	239.7	208.5	185.1	167.2	156.7	151.3	149.9	147.3	147.3
70°	238.3	227.2	201.6	175.2	155.0	141.9	132.8	127.1	125.7	124.6	124.3
72.5°	195.4	186.0	164.7	144.8	127.1	116.0	108.9	106.1	103.5	102.9	102.9
75°	153.3	147.9	130.3	113.5	101.0	93.0	87.9	84.7	83.0	82.8	83.0
77.5°	115.7	110.6	98.4	85.9	77.6	71.4	66.5	65.7	63.4	63.7	63.1
80°	81.9	78.8	71.7	62.3	55.7	50.6	48.3	46.4	45.8	44.9	45.8
82.5°	53.7	50.3	46.1	41.0	35.8	33.3	31.0	30.7	30.4	30.1	30.1
85°	29.3	29.6	26.7	22.2	19.9	18.2	16.8	16.8	16.5	16.2	16.5
87.5°	12.5	11.9	10.8	10.0	8.5	7.7	7.4	7.7	6.8	6.5	6.8
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°	670.0	670.0	670.0	670.0	670.0	670.0	670.0	670.0	670.0	670.0	670.0
2.5°	655.5	652.4	649.8	644.1	641.0	636.8	633.3	637.0	633.1	634.8	632.2
5°	637.9	629.9	624.2	616.0	608.9	602.3	597.5	596.7	594.4	593.2	589.8
7.5°	616.8	607.7	598.4	588.1	579.6	570.5	565.1	560.0	556.8	552.9	549.7
10°	598.6	585.3	573.9	560.8	549.4	539.5	531.5	527.5	523.8	518.4	516.5
12.5°	576.2	562.2	547.7	533.5	522.7	511.3	504.8	498.3	496.0	489.7	489.4
15°	559.1	538.4	524.7	510.5	495.4	486.3	480.6	474.1	471.2	467.0	463.8
17.5°	538.1	519.3	502.2	487.7	474.1	466.7	459.3	454.7	449.9	446.8	441.7
20°	514.7	497.1	480.1	464.4	454.5	445.6	440.0	435.7	430.6	429.1	424.0
22.5°	495.1	475.2	459.0	446.5	435.4	425.2	418.9	416.3	413.2	408.1	408.1
25°	473.5	453.3	439.4	426.3	416.6	407.5	403.3	399.6	396.2	393.0	391.9
27.5°	455.3	437.4	420.3	408.4	400.1	391.6	387.9	383.1	380.5	378.0	374.5
30°	436.0	417.5	403.0	391.6	382.5	375.1	371.1	368.0	365.7	363.5	361.7
32.5°	416.1	399.3	385.3	374.3	365.2	360.0	356.6	354.6	352.1	349.2	347.0
35°	399.0	380.2	366.6	356.9	349.8	345.5	341.6	339.6	336.7	336.7	334.4
37.5°	378.8	362.3	350.1	341.3	335.0	331.0	326.5	325.3	323.4	322.2	321.4
40°	361.2	346.1	334.7	325.9	319.1	316.0	312.5	310.3	309.1	307.7	307.1
42.5°	343.0	328.8	317.9	310.0	304.3	301.7	298.6	297.2	294.6	292.6	292.4
45°	324.5	310.6	300.6	294.1	288.9	285.8	283.8	280.4	279.3	277.0	276.7
47.5°	307.4	293.8	283.8	278.4	273.9	271.6	268.5	264.8	263.3	261.9	261.6
50°	287.8	275.6	266.5	261.4	257.1	253.4	250.3	248.0	247.1	247.1	247.7
52.5°	267.9	257.9	250.5	244.0	240.0	236.0	233.2	232.1	230.6	232.3	233.5
55°	248.6	238.0	232.3	226.4	222.4	217.8	216.4	215.9	215.0	217.3	218.4
57.5°	227.8	220.7	213.9	207.6	204.2	201.3	199.1	198.8	200.5	201.1	204.5
60°	208.2	199.6	193.7	189.1	184.9	183.1	182.6	182.0	183.1	186.3	191.1
62.5°	186.6	180.0	173.5	170.3	167.5	164.4	164.4	164.9	167.5	171.2	176.0
65°	165.5	159.5	155.3	151.3	148.7	147.0	147.6	148.7	151.3	156.1	161.5
67.5°	143.9	139.9	135.9	132.2	129.7	130.0	130.3	131.7	134.8	140.5	145.6
70°	123.1	118.6	115.5	114.0	112.0	110.9	112.6	115.5	118.0	123.1	127.4
72.5°	102.4	98.7	96.4	95.6	95.0	94.1	94.4	97.5	101.2	106.4	111.5
75°	81.9	80.5	78.8	77.6	76.8	77.4	77.9	80.8	83.6	89.0	94.7
77.5°	63.4	61.7	60.6	60.3	59.7	60.0	61.4	63.7	66.5	70.5	75.1
80°	45.2	44.6	44.1	43.8	43.8	44.1	46.4	47.8	50.3	54.0	57.4
82.5°	29.9	29.6	29.6	29.6	29.9	29.9	31.0	33.0	35.0	37.5	40.4
85°	17.3	16.8	17.6	17.9	17.3	18.2	18.8	19.9	20.8	22.2	23.6
87.5°	7.1	7.7	7.4	7.7	7.7	8.2	8.0	9.1	9.7	10.2	10.0
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: P242801

CATALOG NUMBER: S125DRP-S610D927-X4F0-XX-UDD-A-W

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
0°	670.0	670.0	670.0	670.0
2.5°	630.5	632.5	630.8	633.1
5°	588.4	585.8	587.6	586.4
7.5°	549.4	547.2	543.8	542.6
10°	513.3	510.2	509.9	507.9
12.5°	486.9	484.0	480.1	479.5
15°	462.1	459.9	457.9	459.6
17.5°	441.1	439.1	438.5	436.8
20°	421.5	420.0	420.6	416.9
22.5°	405.8	402.7	402.1	402.1
25°	389.3	387.9	386.5	387.9
27.5°	374.8	373.4	372.8	373.1
30°	361.7	358.9	359.2	358.9
32.5°	347.5	345.8	345.2	344.7
35°	333.6	333.6	332.2	332.2
37.5°	320.8	320.5	319.7	320.2
40°	306.0	305.7	304.9	303.2
42.5°	291.8	290.6	290.4	290.1
45°	276.7	276.7	276.1	275.9
47.5°	261.9	262.5	263.6	263.3
50°	248.8	249.1	250.0	250.3
52.5°	234.3	236.3	237.5	237.2
55°	221.0	223.0	225.0	225.2
57.5°	207.6	210.2	212.2	212.7
60°	194.0	197.7	200.2	201.3
62.5°	180.9	185.1	187.7	187.7
65°	166.4	170.6	172.9	174.6
67.5°	151.3	155.6	157.8	159.3
70°	134.5	138.8	142.2	143.3
72.5°	118.0	121.7	124.3	125.7
75°	98.4	103.5	106.1	107.5
77.5°	79.6	84.7	86.2	87.0
80°	60.9	63.7	65.7	66.0
82.5°	43.2	45.5	45.8	46.6
85°	25.6	26.7	27.0	26.7
87.5°	10.5	10.2	10.2	10.8
90°	0.0	0.0	0.0	0.0



TEST NUMBER: P242801  
 CATALOG NUMBER: S125DRP-S610D927-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	16.08	17.65	16.44	17.96	18.27	16.05	17.62	16.42	17.93	18.25
	3H	17.45	18.86	17.83	19.19	19.55	17.48	18.89	17.86	19.22	19.58
	4H	17.94	19.27	18.34	19.62	19.99	17.97	19.29	18.37	19.64	20.02
	6H	18.28	19.50	18.69	19.87	20.26	18.28	19.51	18.69	19.87	20.26
	8H	18.37	19.54	18.80	19.93	20.33	18.36	19.53	18.79	19.92	20.32
	12H	18.42	19.54	18.85	19.92	20.35	18.40	19.52	18.83	19.90	20.33
4H	2H	17.59	18.91	17.98	19.26	19.64	17.13	18.45	17.53	18.80	19.18
	3H	18.93	20.03	19.34	20.43	20.83	18.79	19.89	19.20	20.29	20.69
	4H	19.44	20.43	19.87	20.85	21.28	19.35	20.34	19.78	20.76	21.19
	6H	19.81	20.68	20.27	21.12	21.58	19.72	20.59	20.18	21.03	21.49
	8H	19.91	20.72	20.37	21.17	21.63	19.82	20.63	20.28	21.07	21.54
	12H	19.98	20.70	20.46	21.18	21.65	19.87	20.60	20.35	21.07	21.54
8H	4H	19.92	20.73	20.38	21.18	21.64	19.69	20.50	20.15	20.94	21.41
	6H	20.37	21.04	20.87	21.53	22.01	20.19	20.86	20.69	21.35	21.83
	8H	20.52	21.12	21.03	21.63	22.11	20.34	20.94	20.85	21.45	21.93
	12H	20.62	21.15	21.13	21.64	22.21	20.44	20.97	20.94	21.46	22.02
12H	4H	19.97	20.69	20.45	21.17	21.64	19.71	20.43	20.19	20.91	21.38
	6H	20.45	21.06	20.97	21.57	22.05	20.24	20.84	20.75	21.35	21.84
	8H	20.65	21.18	21.16	21.67	22.23	20.44	20.98	20.95	21.47	22.03