

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: P243661

Luminaire Tested: S125DRP-H610D927-X4F0-XX-UDD-A-W

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-2024  
Report Number: P243661  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-61)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S125DRP-H610D927-X4F0-XX-UDD-A-W  
Description: DEFINE 5 DIRECT RECESSED WITH ASYMMETRIC FLUSH DIFFUSER.  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: (184) 2700K CCT, 90 CRI LEDS  
Ballast/Driver: -

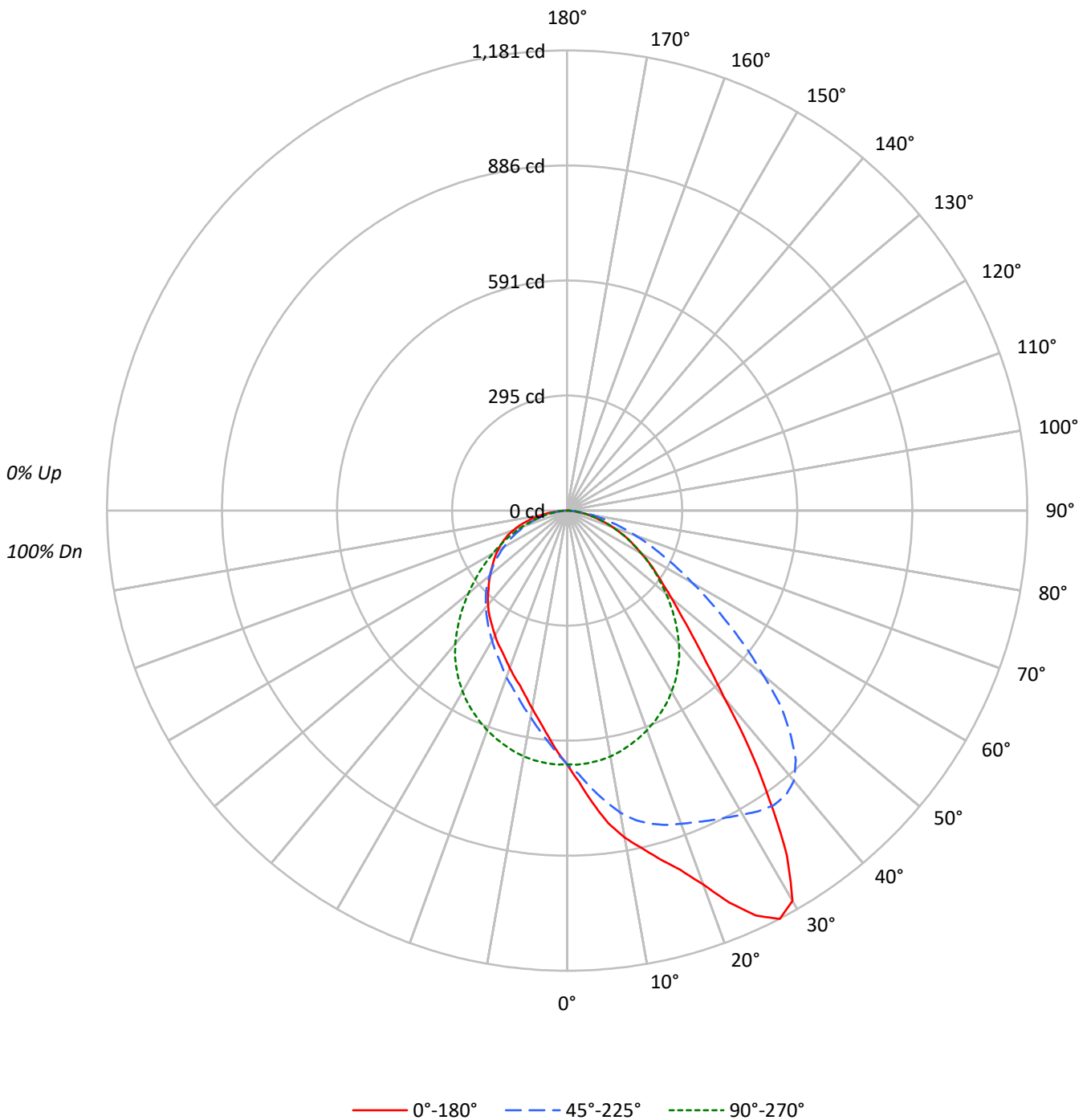
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1855.8 lumens  
Efficiency: N/A  
Efficacy: 107.9 lumens/watt  
Spacing Criteria (0/90/45): 1.43 / 1.22 / 1.53  
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	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	97	90	84	79	87	82	78	84	79	76	81	77	74	72					72			
3	92	82	74	68	89	80	73	67	77	71	66	74	69	65	72	67	63	61					61			
4	84	73	64	58	82	71	63	57	69	62	56	66	61	56	64	59	55	53					53			
5	78	65	56	50	75	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	40					40			
7	67	53	45	39	65	53	44	39	51	44	38	50	43	38	48	42	38	36					36			
8	62	49	40	35	60	48	40	35	47	40	34	46	39	34	44	38	34	32					32			
9	58	45	37	31	57	44	36	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°	4628	4628	4628	4628	4628
5°	5377	5105	4638	4220	4122
10°	6152	5685	4623	3886	3720
15°	6819	6124	4581	3624	3427
20°	7721	6469	4536	3447	3252
25°	8991	6877	4477	3269	3114
30°	9492	7396	4404	3160	3038
35°	7850	8012	4296	3079	2973
40°	5806	8398	4141	3013	2930
45°	4565	8138	3915	2954	2867
50°	3866	7267	3661	2873	2855
55°	3442	6227	3409	2781	2866
60°	3123	5278	3130	2668	2928
65°	2896	4512	2869	2531	3010
70°	2602	3857	2568	2365	3030
75°	2219	3262	2255	2161	2988
80°	1817	2636	1850	1879	2787
85°	1248	1851	1313	1484	2365

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 8138 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	62.9	3.4
10°-20°	188.0	10.1
20°-30°	305.6	16.5
30°-40°	371.8	20.0
40°-50°	340.2	18.3
50°-60°	272.3	14.7
60°-70°	189.6	10.2
70°-80°	100.8	5.4
80°-90°	24.7	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°	556.5	30.0
0°-40°	928.2	50.0
0°-60°	1540.7	83.0
0°-90°	1855.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1855.8	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	651	651	651	651	651	
5°	754	716	650	592	578	75
15°	927	832	623	492	466	266
25°	1146	877	571	417	397	523
35°	905	923	495	355	343	561
45°	454	810	390	294	285	358
55°	278	502	275	224	231	251
65°	172	268	171	150	179	169
75°	81	119	82	79	109	87
85°	15	23	16	18	29	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°	651.2	651.2	651.2	651.2	651.2	651.2	651.2	651.2	651.2	651.2	651.2
2.5°	697.1	694.2	693.4	693.7	692.1	690.8	687.6	683.4	680.5	676.8	675.7
5°	753.6	746.5	747.8	745.7	742.3	737.8	733.8	727.5	721.4	715.6	707.9
7.5°	809.1	807.7	804.1	803.5	798.0	790.3	782.4	773.7	760.7	751.8	741.5
10°	852.4	855.0	849.7	850.0	840.2	832.6	825.7	814.3	799.8	787.7	772.6
12.5°	887.2	888.3	887.5	884.1	877.7	864.8	858.2	846.3	830.5	813.8	802.2
15°	926.8	923.9	919.4	915.2	906.0	896.7	883.0	869.0	848.9	832.3	815.4
17.5°	966.4	965.9	960.4	951.4	939.8	927.6	907.0	889.1	867.7	845.8	824.6
20°	1020.8	1017.9	1009.7	999.5	978.1	960.9	935.3	910.7	882.7	855.3	830.7
22.5°	1089.0	1079.5	1071.3	1055.4	1030.9	1001.0	972.3	936.6	897.5	865.3	834.7
25°	1146.5	1142.3	1133.6	1115.9	1087.9	1052.0	1009.2	968.8	919.7	876.9	837.1
27.5°	1181.4	1179.5	1174.3	1157.6	1134.4	1098.7	1053.1	1001.6	945.8	888.0	840.2
30°	1156.6	1156.8	1159.7	1157.9	1147.6	1124.6	1083.9	1032.2	967.8	901.2	841.0
32.5°	1049.9	1057.0	1079.7	1090.6	1105.1	1109.8	1091.6	1048.6	986.2	914.4	843.7
35°	904.7	922.1	937.4	969.1	1006.8	1037.7	1055.7	1041.7	993.9	923.4	845.0
37.5°	767.9	766.6	790.3	824.6	864.8	917.3	968.3	996.3	980.7	921.6	842.6
40°	625.8	638.0	652.7	683.1	730.1	794.8	855.5	915.5	937.1	905.2	833.4
42.5°	528.6	534.2	549.0	572.7	606.5	672.6	732.5	809.6	865.0	868.7	813.0
45°	454.2	460.2	464.5	488.0	519.4	563.8	625.3	702.9	777.4	809.6	780.0
47.5°	394.5	397.9	407.2	421.4	442.0	481.4	530.5	601.0	682.1	744.6	734.6
50°	349.6	352.3	359.6	367.6	384.5	413.5	453.1	510.9	588.8	657.2	679.7
52.5°	310.0	313.4	317.1	324.8	340.4	359.9	392.1	437.3	509.6	579.6	615.3
55°	277.8	279.1	283.1	288.9	300.8	315.5	341.2	382.1	432.8	502.5	551.6
57.5°	249.8	248.5	252.7	256.7	264.6	277.0	295.5	325.8	374.2	433.6	484.8
60°	219.7	221.0	224.2	227.4	232.9	243.7	258.2	282.5	317.9	371.3	423.5
62.5°	193.8	194.9	195.7	200.2	205.2	212.8	224.7	244.5	273.8	317.9	364.7
65°	172.2	170.3	171.4	174.5	178.5	184.8	195.9	210.5	232.4	268.3	307.1
67.5°	146.8	147.3	147.6	149.5	152.9	159.0	166.9	178.8	196.7	225.0	259.0
70°	125.2	125.4	125.7	127.3	130.2	133.6	139.2	148.4	163.7	185.6	212.3
72.5°	103.0	104.0	104.0	105.4	107.5	109.3	114.6	122.3	133.9	151.3	173.7
75°	80.8	82.6	83.2	84.8	86.6	87.1	91.1	97.2	104.6	118.8	136.5
77.5°	62.8	62.8	63.9	65.7	65.7	67.3	71.6	74.2	80.0	89.8	103.2
80°	44.4	45.2	45.2	45.7	46.7	48.1	49.9	52.3	57.3	64.4	71.6
82.5°	29.0	29.3	29.6	30.9	30.4	31.7	32.5	35.4	37.8	41.2	45.7
85°	15.3	15.3	15.6	16.4	17.2	17.4	18.0	19.3	21.1	22.7	25.3
87.5°	6.3	6.1	6.1	6.6	6.6	6.9	7.1	7.7	8.7	8.7	9.8
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):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	651.2	651.2	651.2	651.2	651.2	651.2	651.2	651.2	651.2	651.2	651.2
2.5°	674.9	672.8	669.1	665.9	662.0	659.1	656.2	652.5	648.8	644.8	640.6
5°	701.9	695.5	688.4	681.3	672.8	665.9	658.6	650.1	643.0	635.1	626.6
7.5°	732.8	721.7	709.3	695.3	682.1	670.2	658.0	646.4	635.8	624.0	612.3
10°	762.6	743.3	727.7	708.7	690.0	672.6	655.9	640.6	625.3	610.5	596.2
12.5°	782.9	761.0	741.5	719.6	697.6	675.7	653.8	632.7	614.5	596.5	581.5
15°	796.9	781.6	755.7	729.3	700.5	672.0	647.2	622.6	601.0	580.1	562.2
17.5°	805.6	785.8	760.5	732.8	701.1	671.2	641.4	612.1	587.3	564.8	544.5
20°	808.0	784.8	758.4	729.6	697.9	665.2	631.6	599.7	572.7	547.1	526.5
22.5°	805.6	778.7	750.4	722.5	689.2	655.9	620.8	585.9	555.0	528.6	507.0
25°	801.7	769.2	739.6	706.6	675.7	644.0	607.9	570.9	538.7	511.2	486.9
27.5°	796.7	759.4	723.0	690.5	657.0	625.8	592.5	554.8	521.2	491.1	468.4
30°	790.8	746.5	706.1	667.5	635.8	604.7	572.2	536.6	502.8	474.0	449.4
32.5°	784.2	732.8	685.2	643.8	610.0	581.2	550.8	516.8	483.5	452.6	431.2
35°	775.0	714.0	662.8	617.9	582.8	551.6	524.9	495.1	462.1	433.3	411.1
37.5°	764.2	697.4	640.1	591.5	553.2	521.2	496.7	472.4	441.5	413.8	392.4
40°	749.7	677.3	616.0	563.5	522.6	491.1	467.1	446.3	420.6	392.7	373.4
42.5°	730.6	655.1	588.8	532.9	493.3	459.7	437.3	418.3	396.3	372.1	353.0
45°	709.0	629.8	558.5	503.6	460.5	428.6	406.6	389.5	372.8	351.2	333.5
47.5°	675.2	599.9	531.0	470.3	428.0	397.1	376.5	360.2	347.8	330.6	313.2
50°	635.1	566.1	498.5	437.5	394.8	364.9	345.4	331.1	320.6	307.4	294.2
52.5°	591.0	528.1	462.9	405.9	363.1	334.8	314.2	301.6	294.7	284.1	273.8
55°	539.5	485.3	424.6	372.6	330.6	301.8	284.1	275.1	267.5	262.2	253.0
57.5°	487.7	442.0	387.9	336.4	297.9	272.2	256.4	246.4	240.8	237.1	230.5
60°	431.2	395.3	345.6	301.0	266.7	242.4	228.4	220.2	215.2	213.1	208.6
62.5°	377.3	349.9	304.7	267.5	236.9	215.5	201.5	194.9	191.7	189.3	186.7
65°	324.3	302.6	267.0	232.1	206.2	187.0	175.9	170.6	168.2	165.6	165.3
67.5°	276.5	256.7	228.1	199.6	178.0	161.6	151.8	146.6	143.9	144.2	142.9
70°	229.5	214.1	190.9	167.7	149.2	136.3	127.0	123.6	122.5	122.3	121.2
72.5°	185.6	176.9	156.6	137.0	122.5	112.5	105.1	102.2	100.9	100.3	100.3
75°	147.1	140.7	123.3	108.5	97.4	89.3	84.2	82.1	80.3	81.3	80.5
77.5°	110.4	105.1	93.2	82.6	74.2	67.3	65.0	63.1	62.1	61.8	62.8
80°	77.6	74.5	67.1	58.6	52.3	48.3	46.7	45.2	44.4	43.8	44.4
82.5°	49.9	48.1	42.8	37.8	34.1	32.0	30.4	29.6	28.3	28.5	29.0
85°	27.2	26.7	23.2	21.7	18.2	18.0	16.9	16.1	16.4	15.8	16.6
87.5°	11.1	10.6	9.8	9.0	7.9	7.1	6.6	7.1	6.3	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



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**CANDELA DISTRIBUTION (continued):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	651.2	651.2	651.2	651.2	651.2	651.2	651.2	651.2	651.2	651.2	651.2
2.5°	638.5	635.6	632.1	629.0	624.2	621.1	619.5	620.0	618.2	617.6	617.4
5°	621.6	615.0	608.6	603.4	597.8	591.5	587.0	585.7	585.1	583.8	580.9
7.5°	604.2	595.7	587.5	579.9	571.9	564.6	560.1	556.4	554.3	550.6	549.8
10°	585.7	575.4	566.7	555.6	546.1	538.4	532.6	529.4	527.6	524.2	521.2
12.5°	568.0	557.2	543.7	533.7	523.6	515.7	509.1	503.8	502.5	498.0	495.6
15°	549.0	535.8	523.6	512.0	502.5	492.5	488.5	483.8	479.0	475.0	474.2
17.5°	530.8	514.9	503.0	491.7	480.1	472.7	467.4	464.2	460.5	458.4	454.7
20°	508.8	495.9	482.7	472.1	462.1	455.8	448.6	445.7	443.1	438.1	436.5
22.5°	490.4	474.8	463.7	453.1	444.1	435.2	430.1	427.2	423.3	420.6	418.5
25°	471.1	458.1	444.1	433.6	425.9	416.9	413.5	409.8	406.4	404.0	401.9
27.5°	452.3	438.1	426.7	416.2	408.2	401.9	397.1	393.2	390.8	389.0	387.6
30°	432.8	419.6	409.0	399.3	390.3	385.0	380.5	378.9	376.3	375.0	372.8
32.5°	415.1	401.6	391.6	383.1	375.2	369.9	367.3	364.9	362.3	359.9	359.6
35°	395.0	383.4	374.2	364.9	359.1	354.9	352.0	349.6	347.5	345.6	344.6
37.5°	377.3	366.2	355.9	349.3	343.0	339.3	336.1	335.4	333.2	333.5	331.9
40°	358.3	348.3	339.6	333.0	328.7	324.8	322.7	320.0	318.7	319.0	317.7
42.5°	339.8	330.6	322.7	316.6	312.1	309.2	307.4	305.2	303.7	302.6	302.3
45°	321.1	312.9	306.3	300.2	296.5	293.9	291.5	288.9	287.6	287.0	286.8
47.5°	302.6	295.2	288.1	283.9	280.4	278.1	275.7	273.6	272.5	271.7	270.4
50°	283.6	276.2	271.2	265.9	263.0	259.8	257.2	256.1	254.8	254.5	255.9
52.5°	263.8	258.0	253.5	249.3	245.8	242.4	239.8	238.4	239.2	239.2	240.8
55°	245.0	239.0	234.7	231.3	227.6	224.4	221.8	221.8	221.8	223.4	225.5
57.5°	224.2	218.9	215.7	211.8	208.3	206.2	204.4	204.1	205.2	207.8	210.2
60°	203.1	199.4	195.9	192.8	189.3	187.7	187.5	187.0	188.5	191.2	196.2
62.5°	182.2	179.8	175.6	174.0	171.1	169.3	169.3	169.8	172.2	176.4	180.9
65°	162.1	158.7	155.5	153.9	152.1	150.5	150.5	152.6	156.1	160.0	165.6
67.5°	141.5	138.6	136.5	134.9	132.8	132.0	132.8	135.2	139.4	143.4	149.2
70°	119.4	118.8	117.0	114.9	113.8	113.8	114.6	117.2	120.4	126.5	131.5
72.5°	99.0	99.0	98.0	96.6	95.9	96.6	97.2	99.8	103.8	109.1	114.6
75°	80.5	79.7	79.0	78.4	78.2	78.7	79.5	81.6	86.3	91.4	95.9
77.5°	62.3	61.8	61.0	61.5	61.5	61.8	64.2	66.5	69.2	73.1	77.9
80°	44.9	45.2	44.4	44.1	45.4	45.9	47.8	49.6	51.5	56.0	59.4
82.5°	29.6	30.1	29.8	30.4	30.9	30.9	33.0	34.9	36.4	39.6	42.2
85°	16.9	17.2	17.2	18.0	18.5	18.2	20.1	21.1	21.9	24.3	25.9
87.5°	7.4	7.7	7.9	7.9	7.9	9.0	9.2	9.8	10.0	10.6	11.4
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: P243661

CATALOG NUMBER: S125DRP-H610D927-X4F0-XX-UDD-A-W

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
0°	651.2	651.2	651.2	651.2
2.5°	615.0	614.7	616.0	616.8
5°	579.1	578.3	577.2	577.8
7.5°	547.1	545.0	544.5	544.5
10°	518.9	516.8	516.2	515.4
12.5°	494.8	491.7	490.4	489.0
15°	472.1	471.6	468.7	465.8
17.5°	451.3	452.1	449.2	447.8
20°	433.8	431.5	430.4	429.9
22.5°	416.2	414.3	414.3	412.5
25°	400.3	398.7	399.0	397.1
27.5°	385.5	385.3	385.0	384.5
30°	371.8	370.7	369.7	370.2
32.5°	358.6	357.0	356.2	355.9
35°	344.9	344.3	343.3	342.7
37.5°	331.4	331.7	330.3	330.1
40°	316.9	316.6	316.3	315.8
42.5°	301.6	300.8	301.3	301.0
45°	286.2	285.4	286.0	285.2
47.5°	271.2	271.7	271.7	272.0
50°	256.4	257.5	257.5	258.2
52.5°	242.7	244.8	244.8	244.5
55°	227.9	230.3	231.0	231.3
57.5°	213.9	216.3	218.6	219.2
60°	198.8	203.1	205.4	206.0
62.5°	185.4	189.3	192.5	192.8
65°	170.3	175.1	178.0	179.0
67.5°	155.0	158.7	162.7	164.2
70°	137.6	142.1	144.7	145.8
72.5°	119.4	124.4	127.8	128.3
75°	101.9	105.6	108.3	108.8
77.5°	82.1	85.8	88.2	88.7
80°	62.3	65.5	67.1	68.1
82.5°	44.1	46.2	47.0	48.1
85°	27.2	28.8	29.0	29.0
87.5°	11.9	12.1	12.1	12.7
90°	0.0	0.0	0.0	0.0



TEST NUMBER: P243661  
 CATALOG NUMBER: S125DRP-H610D927-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	16.16	17.73	16.52	18.04	18.36	15.90	17.47	16.27	17.79	18.10
	3H	17.51	18.93	17.89	19.25	19.62	17.33	18.74	17.70	19.07	19.43
	4H	17.99	19.32	18.39	19.67	20.05	17.81	19.14	18.21	19.49	19.87
	6H	18.30	19.53	18.71	19.89	20.29	18.13	19.36	18.54	19.72	20.11
	8H	18.38	19.55	18.80	19.94	20.34	18.21	19.38	18.63	19.77	20.17
	12H	18.41	19.53	18.84	19.91	20.34	18.25	19.37	18.68	19.75	20.18
4H	2H	17.55	18.87	17.95	19.22	19.60	16.96	18.29	17.36	18.64	19.02
	3H	18.91	20.01	19.32	20.41	20.81	18.62	19.73	19.03	20.12	20.53
	4H	19.41	20.41	19.84	20.82	21.26	19.18	20.18	19.61	20.59	21.03
	6H	19.76	20.63	20.22	21.07	21.53	19.56	20.43	20.01	20.87	21.33
	8H	19.85	20.66	20.31	21.11	21.57	19.65	20.46	20.11	20.91	21.37
	12H	19.90	20.63	20.38	21.11	21.58	19.71	20.44	20.19	20.91	21.38
8H	4H	19.87	20.68	20.33	21.12	21.59	19.53	20.34	19.99	20.79	21.25
	6H	20.29	20.97	20.79	21.46	21.93	20.03	20.71	20.53	21.20	21.67
	8H	20.42	21.03	20.93	21.53	22.02	20.18	20.78	20.69	21.29	21.78
	12H	20.51	21.04	21.02	21.53	22.10	20.28	20.81	20.79	21.31	21.87
12H	4H	19.91	20.63	20.39	21.11	21.58	19.55	20.28	20.03	20.76	21.23
	6H	20.36	20.97	20.88	21.48	21.96	20.08	20.69	20.59	21.19	21.68
	8H	20.54	21.07	21.05	21.57	22.13	20.29	20.82	20.79	21.31	21.87