

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: P242831

Luminaire Tested: S125DRP-S610D940-X4F0-XX-UDD-A-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P242831
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-S610D940-X4F0-XX-UDD-A-W
Description: DEFINE 5 DIRECT RECESSED WITH ASYMMETRIC FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

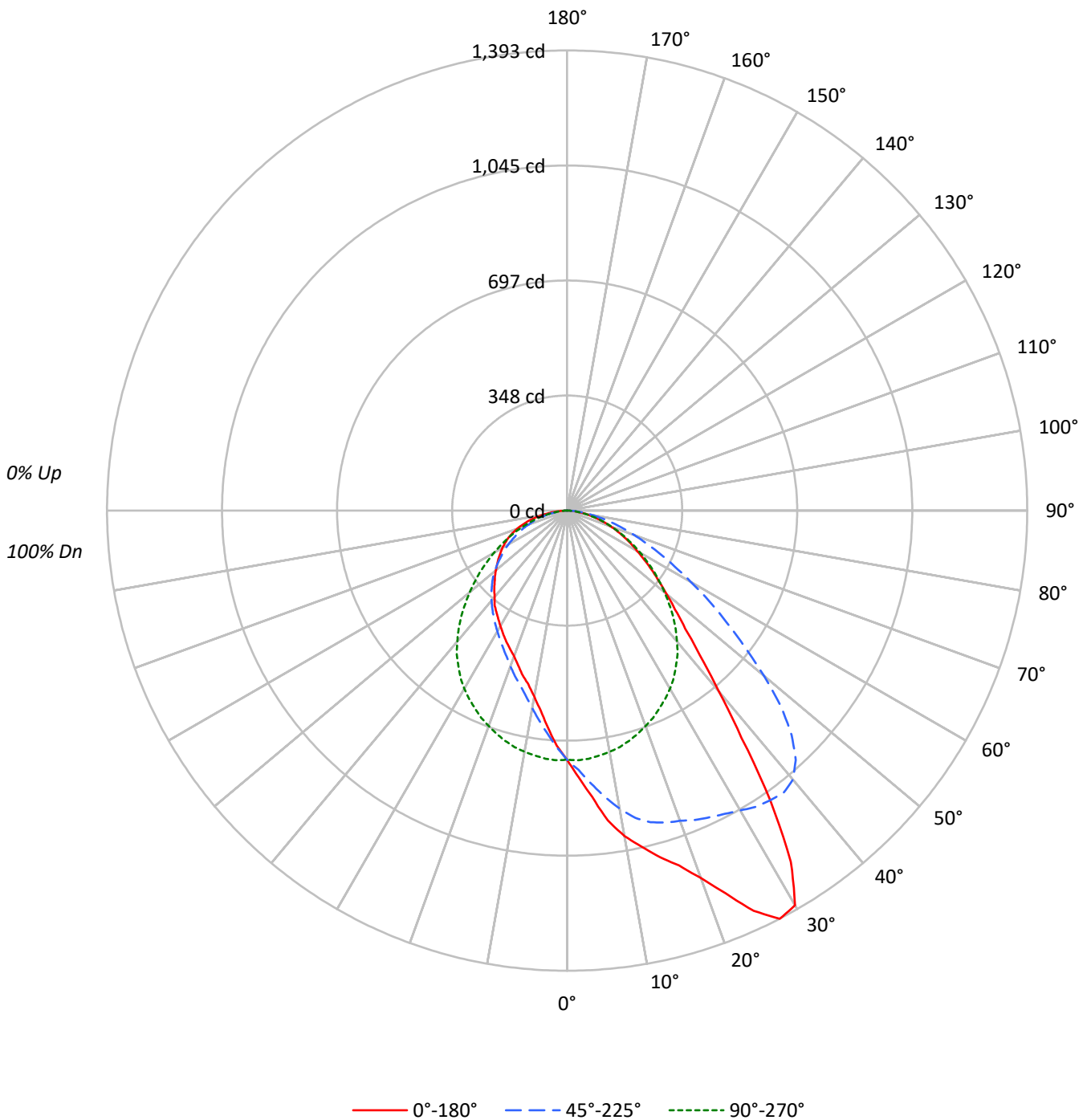
Lumens per Lamp: N/A
Luminaire Lumens: 2128.4 lumens
Efficiency: N/A
Efficacy: 113.2 lumens/watt
Spacing Criteria (0/90/45): 1.43 / 1.23 / 1.53
Luminous Opening: Rectangular (W 3.88' x L: 0.39' x H: 0')
CIE Type: Direct

Input Watts (W): 18.8
Input Voltage (V): 120
Input Current (A_{in}): 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°	5360	5360	5360	5360	5360
5°	6208	5913	5379	4837	4709
10°	7222	6612	5351	4383	4126
15°	7995	7187	5312	4028	3806
20°	8949	7559	5249	3794	3550
25°	10483	8031	5179	3597	3424
30°	11323	8602	5110	3465	3316
35°	9310	9291	4980	3374	3244
40°	6617	9866	4799	3300	3166
45°	5084	9656	4556	3234	3121
50°	4340	8590	4255	3153	3115
55°	3864	7295	3959	3038	3141
60°	3485	6161	3636	2931	3221
65°	3219	5249	3311	2783	3306
70°	2928	4464	2974	2593	3352
75°	2584	3814	2620	2392	3323
80°	2173	3131	2137	2030	3041
85°	1721	2275	1541	1672	2455

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 9656 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	72.6	3.4
10°-20°	216.2	10.2
20°-30°	351.2	16.5
30°-40°	429.2	20.2
40°-50°	389.4	18.3
50°-60°	310.1	14.6
60°-70°	216.0	10.1
70°-80°	115.1	5.4
80°-90°	28.5	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°	640.0	30.1
0°-40°	1069.2	50.2
0°-60°	1768.7	83.1
0°-90°	2128.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2128.4	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	754	754	754	754	754	
5°	870	829	754	678	660	87
15°	1086	977	722	547	517	311
25°	1337	1024	660	459	437	612
35°	1073	1071	574	389	374	658
45°	506	961	453	322	310	402
55°	312	589	320	245	254	280
65°	191	312	197	166	197	190
75°	94	139	95	87	121	101
85°	21	28	19	20	30	25
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°	754.2	754.2	754.2	754.2	754.2	754.2	754.2	754.2	754.2	754.2	754.2
2.5°	808.6	807.3	806.1	803.5	805.4	800.0	797.4	792.9	787.5	785.6	783.3
5°	870.1	871.7	873.3	866.6	867.2	862.7	852.5	844.2	837.4	828.8	822.7
7.5°	946.3	941.5	941.8	937.6	930.3	924.2	914.3	900.5	888.0	873.9	861.8
10°	1000.7	1001.0	998.1	993.0	985.0	979.2	965.2	951.7	935.4	916.2	902.4
12.5°	1041.7	1043.3	1039.4	1032.1	1029.2	1014.5	1004.2	987.6	967.4	953.0	930.3
15°	1086.5	1083.0	1080.4	1071.8	1065.0	1051.6	1034.0	1017.3	996.2	976.7	957.2
17.5°	1126.2	1129.1	1124.9	1118.5	1098.7	1083.0	1061.2	1040.1	1014.8	990.5	967.7
20°	1183.2	1185.7	1178.4	1164.6	1139.6	1123.9	1092.9	1063.4	1033.0	999.4	973.8
22.5°	1254.2	1251.0	1240.5	1217.7	1196.9	1164.6	1130.3	1092.9	1052.9	1013.8	977.6
25°	1336.8	1323.4	1317.3	1291.4	1262.9	1220.3	1174.2	1121.7	1074.3	1024.1	980.5
27.5°	1393.2	1387.7	1379.1	1358.0	1325.3	1277.0	1222.5	1159.8	1096.1	1034.6	979.9
30°	1379.7	1380.4	1381.0	1375.2	1356.0	1321.8	1267.7	1198.9	1119.5	1048.1	982.1
32.5°	1260.6	1275.0	1288.8	1306.7	1318.3	1318.6	1289.8	1229.3	1147.0	1063.4	980.9
35°	1073.0	1076.6	1112.7	1148.6	1197.3	1235.0	1260.3	1232.8	1164.0	1070.8	979.9
37.5°	867.5	885.1	912.3	952.7	1025.7	1085.2	1163.3	1190.2	1157.9	1076.9	979.6
40°	713.2	729.2	745.6	786.9	846.1	922.3	1014.1	1092.6	1110.8	1063.4	970.0
42.5°	594.1	606.0	624.6	653.0	700.1	765.4	852.2	960.7	1035.0	1024.4	949.8
45°	505.8	513.8	527.9	552.5	588.4	641.2	718.7	830.7	928.4	960.7	915.5
47.5°	443.0	443.4	454.9	472.5	499.7	548.4	606.3	698.5	803.8	878.4	867.8
50°	392.5	390.9	399.5	414.2	434.7	464.5	519.2	589.3	689.5	776.9	801.3
52.5°	348.9	349.6	354.1	364.0	380.3	404.6	442.1	503.5	585.5	675.8	727.0
55°	311.8	310.5	316.6	324.0	336.4	353.1	382.5	430.9	500.3	588.7	648.2
57.5°	275.9	279.5	282.0	287.1	298.0	309.6	335.8	372.9	430.2	508.7	571.7
60°	245.2	248.7	250.7	255.8	264.1	273.7	292.9	321.7	368.1	433.4	495.9
62.5°	217.7	220.2	220.6	225.0	231.4	240.7	254.8	277.9	312.1	367.2	428.0
65°	191.4	191.4	192.7	197.5	200.7	209.0	220.6	238.2	267.6	312.1	364.3
67.5°	165.8	167.4	167.1	169.3	172.2	179.3	187.9	202.6	226.0	259.6	302.8
70°	140.9	142.1	141.8	143.4	146.6	150.8	157.5	171.3	187.0	214.8	250.7
72.5°	118.4	118.8	117.8	120.0	121.6	125.2	132.9	138.6	153.0	175.4	203.3
75°	94.1	94.8	95.4	96.7	98.6	100.5	104.4	111.7	121.3	138.9	157.8
77.5°	74.9	73.3	75.2	74.9	75.9	77.5	81.0	85.2	93.5	105.3	121.0
80°	53.1	53.5	53.5	53.8	55.4	56.3	59.2	62.1	68.2	76.5	86.8
82.5°	35.2	36.2	35.5	36.2	37.5	38.1	39.4	41.6	44.5	50.6	57.3
85°	21.1	19.5	20.2	20.8	20.8	21.1	22.4	23.4	25.3	27.9	30.7
87.5°	7.7	8.3	8.6	8.6	9.0	9.0	10.2	10.2	11.2	12.2	13.4
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°	754.2	754.2	754.2	754.2	754.2	754.2	754.2	754.2	754.2	754.2	754.2
2.5°	781.4	779.2	776.6	772.1	766.7	763.8	759.3	756.4	750.7	745.9	740.8
5°	815.3	807.0	799.3	789.4	778.5	771.5	763.2	753.9	744.3	734.4	723.5
7.5°	849.3	835.5	820.5	804.8	789.4	775.0	761.6	747.8	735.3	719.6	706.5
10°	883.5	865.0	845.1	821.8	799.0	779.2	759.0	741.4	723.5	704.3	687.3
12.5°	917.8	891.5	861.4	835.2	806.7	781.7	757.1	733.4	709.7	687.9	667.5
15°	930.3	908.5	882.6	846.1	815.3	782.4	751.0	721.9	694.7	671.0	646.0
17.5°	942.4	914.6	887.1	851.8	811.8	776.3	740.8	709.1	679.0	649.2	626.5
20°	945.3	916.5	887.4	853.1	811.8	769.6	734.0	694.0	661.0	630.0	600.5
22.5°	944.4	910.7	878.4	842.9	802.9	764.8	720.0	679.0	642.5	612.1	581.0
25°	937.3	902.4	862.7	827.2	787.5	746.2	702.7	660.4	623.9	589.0	558.6
27.5°	933.2	889.0	845.4	804.5	766.4	728.3	686.0	642.5	602.5	566.9	538.8
30°	923.9	874.2	823.7	780.5	741.1	704.3	664.9	622.6	580.4	545.8	515.1
32.5°	915.5	855.7	801.6	753.6	711.3	675.8	640.2	600.5	559.3	524.0	493.3
35°	904.3	837.4	776.3	723.2	678.7	641.8	611.4	574.0	535.9	501.9	472.5
37.5°	891.2	813.7	749.1	693.7	645.4	606.9	578.1	549.0	510.9	477.6	451.4
40°	875.2	788.1	718.7	661.7	611.1	570.8	544.5	517.3	486.9	456.5	428.3
42.5°	855.0	765.1	687.9	625.5	575.6	536.5	508.7	486.6	460.7	432.8	407.2
45°	829.4	736.3	654.3	588.4	537.8	499.1	470.6	453.3	433.1	406.2	384.1
47.5°	795.5	703.6	619.1	550.9	498.7	462.9	435.7	418.7	404.0	382.9	362.1
50°	747.2	666.2	580.4	512.8	460.7	424.5	399.8	384.8	372.6	357.3	340.3
52.5°	693.1	619.1	542.3	475.7	424.2	388.6	364.6	351.8	342.2	332.3	315.6
55°	635.1	571.1	498.1	434.7	387.0	352.1	331.0	319.5	311.2	302.8	292.6
57.5°	572.7	520.8	453.9	394.7	350.5	317.9	298.0	286.2	279.5	275.0	268.6
60°	506.1	463.2	407.5	354.7	311.8	283.6	264.4	255.8	250.3	246.8	242.3
62.5°	444.3	411.0	360.5	313.4	277.2	251.0	234.3	226.0	220.9	219.6	216.1
65°	383.8	356.6	314.0	274.0	242.0	219.3	204.9	196.9	193.7	191.8	192.1
67.5°	323.0	305.4	269.9	234.6	208.4	188.2	176.4	170.3	168.7	165.8	165.8
70°	268.3	255.8	227.0	197.2	174.5	159.7	149.5	143.1	141.5	140.2	139.9
72.5°	219.9	209.4	185.3	162.9	143.1	130.6	122.6	119.4	116.5	115.9	115.9
75°	172.5	166.5	146.6	127.7	113.6	104.7	98.9	95.4	93.5	93.2	93.5
77.5°	130.3	124.5	110.8	96.7	87.4	80.4	74.9	73.9	71.4	71.7	71.1
80°	92.2	88.7	80.7	70.1	62.7	57.0	54.4	52.2	51.5	50.6	51.5
82.5°	60.5	56.7	51.9	46.1	40.3	37.5	34.9	34.6	34.3	33.9	33.9
85°	33.0	33.3	30.1	25.0	22.4	20.5	18.9	18.9	18.6	18.2	18.6
87.5°	14.1	13.4	12.2	11.2	9.6	8.6	8.3	8.6	7.7	7.4	7.7
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°	754.2	754.2	754.2	754.2	754.2	754.2	754.2	754.2	754.2	754.2	754.2
2.5°	737.9	734.4	731.5	725.1	721.6	716.8	712.9	717.1	712.6	714.5	711.6
5°	718.0	709.1	702.7	693.4	685.4	678.0	672.6	671.6	669.1	667.8	663.9
7.5°	694.3	684.1	673.5	662.0	652.4	642.2	636.1	630.3	626.8	622.3	618.8
10°	673.9	658.8	646.0	631.3	618.5	607.3	598.3	593.8	589.7	583.6	581.3
12.5°	648.6	632.9	616.6	600.5	588.4	575.6	568.2	560.9	558.3	551.2	550.9
15°	629.4	606.0	590.6	574.6	557.7	547.4	541.0	533.6	530.4	525.6	522.1
17.5°	605.7	584.5	565.3	549.0	533.6	525.3	517.0	511.9	506.4	502.9	497.1
20°	579.4	559.6	540.4	522.8	511.6	501.6	495.2	490.4	484.7	483.1	477.3
22.5°	557.3	534.9	516.7	502.6	490.1	478.6	471.5	468.7	465.1	459.4	459.4
25°	533.0	510.3	494.6	479.9	469.0	458.7	453.9	449.8	445.9	442.4	441.1
27.5°	512.5	492.3	473.1	459.7	450.4	440.8	436.6	431.2	428.3	425.4	421.6
30°	490.7	469.9	453.6	440.8	430.6	422.2	417.8	414.2	411.7	409.1	407.2
32.5°	468.3	449.4	433.8	421.3	411.0	405.3	401.4	399.2	396.3	393.1	390.5
35°	449.1	428.0	412.6	401.8	393.7	388.9	384.5	382.2	379.0	379.0	376.5
37.5°	426.4	407.8	394.1	384.1	377.1	372.6	367.5	366.2	364.0	362.7	361.7
40°	406.6	389.6	376.8	366.9	359.2	355.7	351.8	349.3	348.0	346.4	345.7
42.5°	386.1	370.1	357.9	348.9	342.5	339.6	336.1	334.5	331.6	329.4	329.1
45°	365.3	349.6	338.4	331.0	325.2	321.7	319.5	315.6	314.4	311.8	311.5
47.5°	346.1	330.7	319.5	313.4	308.3	305.7	302.2	298.0	296.4	294.8	294.5
50°	324.0	310.2	300.0	294.2	289.4	285.2	281.7	279.1	278.2	278.2	278.8
52.5°	301.6	290.3	282.0	274.7	270.2	265.7	262.5	261.2	259.6	261.5	262.8
55°	279.8	267.9	261.5	254.8	250.3	245.2	243.6	243.0	242.0	244.6	245.9
57.5°	256.4	248.4	240.7	233.7	229.8	226.6	224.1	223.8	225.7	226.3	230.2
60°	234.3	224.7	218.0	212.9	208.1	206.2	205.5	204.9	206.2	209.7	215.1
62.5°	210.0	202.6	195.3	191.8	188.6	185.0	185.0	185.7	188.6	192.7	198.2
65°	186.3	179.6	174.8	170.3	167.4	165.5	166.1	167.4	170.3	175.7	181.8
67.5°	162.0	157.5	153.0	148.9	146.0	146.3	146.6	148.2	151.7	158.1	163.9
70°	138.6	133.5	130.0	128.4	126.1	124.8	126.8	130.0	132.9	138.6	143.4
72.5°	115.2	111.1	108.5	107.6	106.9	106.0	106.3	109.8	114.0	119.7	125.5
75°	92.2	90.6	88.7	87.4	86.4	87.1	87.7	90.9	94.1	100.2	106.6
77.5°	71.4	69.5	68.2	67.9	67.2	67.5	69.1	71.7	74.9	79.4	84.5
80°	50.9	50.3	49.6	49.3	49.3	49.6	52.2	53.8	56.7	60.8	64.7
82.5°	33.6	33.3	33.3	33.3	33.6	33.6	34.9	37.1	39.4	42.3	45.5
85°	19.5	18.9	19.8	20.2	19.5	20.5	21.1	22.4	23.4	25.0	26.6
87.5°	8.0	8.6	8.3	8.6	8.6	9.3	9.0	10.2	10.9	11.5	11.2
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: P242831

CATALOG NUMBER: S125DRP-S610D940-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	754.2	754.2	754.2	754.2
2.5°	709.7	711.9	710.0	712.6
5°	662.3	659.4	661.4	660.1
7.5°	618.5	615.9	612.1	610.8
10°	577.8	574.3	574.0	571.7
12.5°	548.0	544.8	540.4	539.7
15°	520.2	517.6	515.4	517.3
17.5°	496.5	494.3	493.6	491.7
20°	474.4	472.8	473.5	469.3
22.5°	456.8	453.3	452.7	452.7
25°	438.2	436.6	435.0	436.6
27.5°	421.9	420.3	419.7	420.0
30°	407.2	404.0	404.3	404.0
32.5°	391.2	389.3	388.6	388.0
35°	375.5	375.5	373.9	373.9
37.5°	361.1	360.8	359.8	360.5
40°	344.4	344.1	343.2	341.2
42.5°	328.4	327.2	326.8	326.5
45°	311.5	311.5	310.8	310.5
47.5°	294.8	295.5	296.8	296.4
50°	280.1	280.4	281.4	281.7
52.5°	263.8	266.0	267.3	267.0
55°	248.7	251.0	253.2	253.5
57.5°	233.7	236.6	238.8	239.5
60°	218.3	222.5	225.4	226.6
62.5°	203.6	208.4	211.3	211.3
65°	187.3	192.1	194.6	196.6
67.5°	170.3	175.1	177.7	179.3
70°	151.4	156.2	160.1	161.3
72.5°	132.9	137.0	139.9	141.5
75°	110.8	116.5	119.4	121.0
77.5°	89.6	95.4	97.0	98.0
80°	68.5	71.7	73.9	74.3
82.5°	48.7	51.2	51.5	52.5
85°	28.8	30.1	30.4	30.1
87.5°	11.8	11.5	11.5	12.2
90°	0.0	0.0	0.0	0.0



TEST NUMBER: P242831
 CATALOG NUMBER: S125DRP-S610D940-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	16.49	18.06	16.85	18.37	18.69	16.46	18.03	16.83	18.34	18.66
	3H	17.86	19.27	18.24	19.60	19.96	17.89	19.30	18.27	19.63	19.99
	4H	18.35	19.68	18.75	20.03	20.40	18.38	19.70	18.78	20.05	20.43
	6H	18.69	19.92	19.10	20.28	20.67	18.69	19.92	19.10	20.28	20.68
	8H	18.78	19.95	19.21	20.34	20.74	18.77	19.94	19.20	20.33	20.73
	12H	18.83	19.95	19.26	20.33	20.76	18.81	19.93	19.24	20.31	20.74
4H	2H	18.00	19.32	18.40	19.67	20.05	17.54	18.87	17.94	19.21	19.59
	3H	19.34	20.44	19.75	20.84	21.24	19.20	20.31	19.61	20.70	21.11
	4H	19.85	20.84	20.28	21.26	21.70	19.76	20.75	20.19	21.17	21.60
	6H	20.22	21.09	20.68	21.53	21.99	20.13	21.00	20.59	21.44	21.90
	8H	20.32	21.13	20.79	21.58	22.04	20.23	21.04	20.69	21.48	21.95
	12H	20.39	21.11	20.87	21.59	22.06	20.28	21.01	20.76	21.49	21.96
8H	4H	20.33	21.14	20.80	21.59	22.05	20.10	20.91	20.56	21.35	21.82
	6H	20.78	21.46	21.28	21.95	22.42	20.60	21.27	21.10	21.76	22.24
	8H	20.93	21.53	21.44	22.04	22.53	20.75	21.35	21.26	21.86	22.35
	12H	21.03	21.56	21.54	22.05	22.62	20.85	21.38	21.36	21.87	22.43
12H	4H	20.38	21.11	20.86	21.58	22.05	20.12	20.84	20.60	21.32	21.79
	6H	20.87	21.47	21.38	21.98	22.46	20.65	21.25	21.16	21.76	22.25
	8H	21.06	21.59	21.57	22.08	22.65	20.85	21.39	21.36	21.88	22.44