

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: P243662

Luminaire Tested: S125DRP-H850D927-X4F0-XX-UDD-A-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P243662
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-H850D927-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

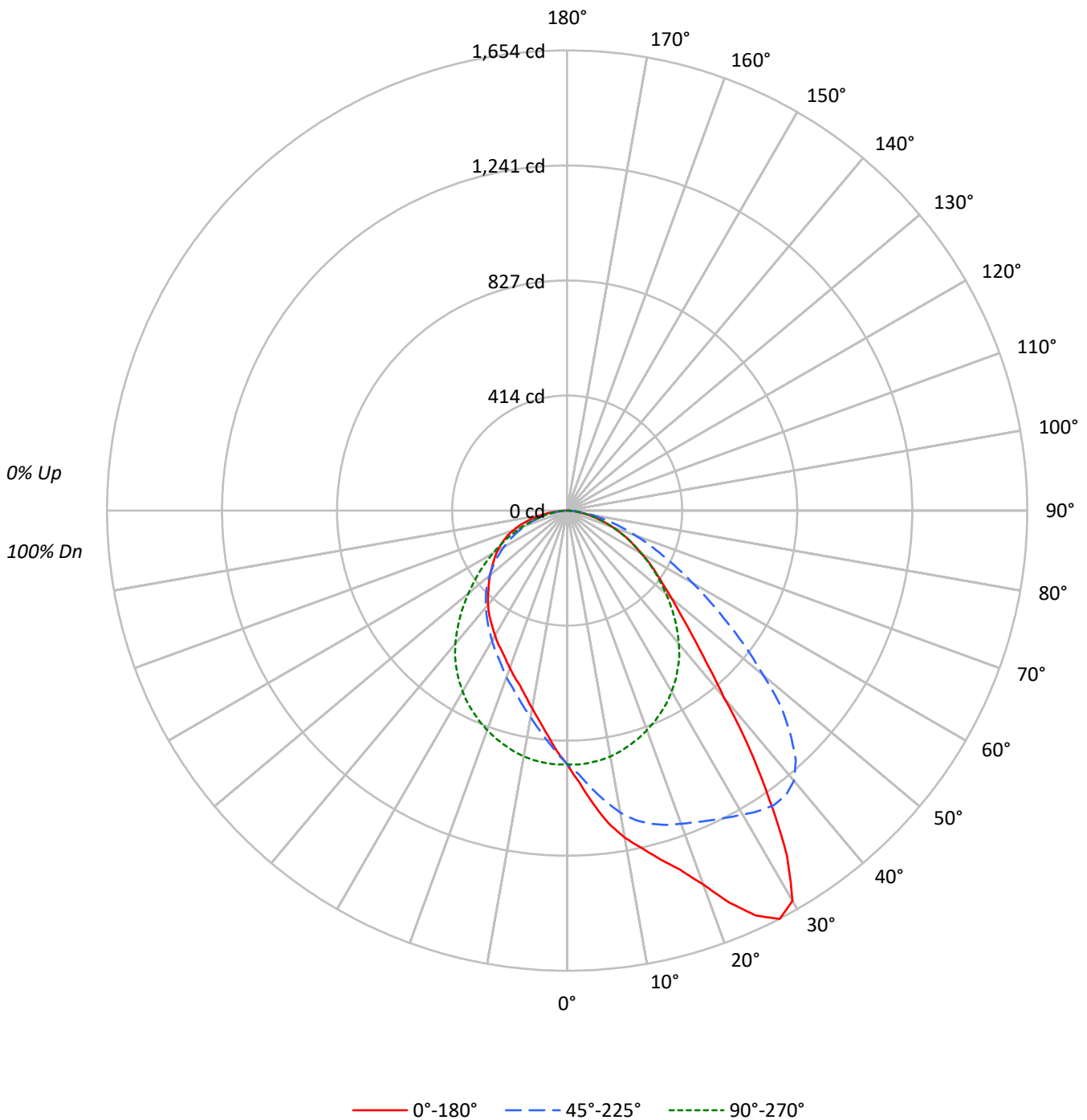
Lumens per Lamp: N/A
Luminaire Lumens: 2599.1 lumens
Efficiency: N/A
Efficacy: 110.1 lumens/watt
Spacing Criteria (0/90/45): 1.43 / 1.22 / 1.53
Luminous Opening: Rectangular (W 3.88' x L: 0.39' x H: 0')
CIE Type: Direct

Input Watts (W): 23.6
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	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°	6481	6481	6481	6481	6481
5°	7530	7150	6496	5910	5773
10°	8615	7961	6475	5442	5210
15°	9551	8577	6416	5075	4800
20°	10814	9060	6352	4828	4553
25°	12592	9631	6270	4579	4362
30°	13293	10359	6167	4425	4255
35°	10993	11220	6016	4312	4165
40°	8131	11762	5799	4221	4104
45°	6394	11396	5483	4137	4014
50°	5414	10178	5127	4024	3999
55°	4820	8720	4774	3895	4015
60°	4374	7390	4384	3737	4100
65°	4055	6318	4018	3545	4216
70°	3643	5403	3597	3312	4241
75°	3109	4569	3158	3026	4185
80°	2542	3692	2587	2632	3905
85°	1745	2593	1843	2079	3319

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 11396 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	88.1	3.4
10°-20°	263.2	10.1
20°-30°	428.0	16.5
30°-40°	520.7	20.0
40°-50°	476.5	18.3
50°-60°	381.3	14.7
60°-70°	265.6	10.2
70°-80°	141.1	5.4
80°-90°	34.6	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°	779.3	30.0
0°-40°	1300.0	50.0
0°-60°	2157.7	83.0
0°-90°	2599.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2599.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	912	912	912	912	912	
5°	1055	1002	910	828	809	105
15°	1298	1166	872	690	652	372
25°	1606	1228	800	584	556	733
35°	1267	1293	693	497	480	785
45°	636	1134	546	412	399	502
55°	389	704	385	314	324	351
65°	241	376	239	211	251	237
75°	113	166	115	110	152	122
85°	21	32	23	26	41	28
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°	911.9	911.9	911.9	911.9	911.9	911.9	911.9	911.9	911.9	911.9	911.9
2.5°	976.3	972.2	971.1	971.5	969.3	967.4	963.0	957.1	953.0	947.8	946.3
5°	1055.4	1045.4	1047.3	1044.3	1039.5	1033.2	1027.7	1018.8	1010.3	1002.2	991.5
7.5°	1133.1	1131.2	1126.1	1125.3	1117.6	1106.8	1095.7	1083.5	1065.4	1052.8	1038.4
10°	1193.7	1197.4	1190.0	1190.4	1176.7	1166.0	1156.4	1140.5	1120.1	1103.1	1082.1
12.5°	1242.6	1244.0	1242.9	1238.1	1229.2	1211.1	1201.9	1185.2	1163.0	1139.7	1123.5
15°	1298.0	1294.0	1287.7	1281.8	1268.8	1255.9	1236.6	1217.0	1188.9	1165.6	1142.0
17.5°	1353.5	1352.8	1345.0	1332.4	1316.1	1299.1	1270.3	1245.1	1215.2	1184.5	1154.9
20°	1429.7	1425.6	1414.1	1399.7	1369.8	1345.7	1309.9	1275.5	1236.3	1197.8	1163.4
22.5°	1525.1	1511.8	1500.3	1478.1	1443.7	1401.9	1361.6	1311.7	1257.0	1211.9	1169.0
25°	1605.7	1599.8	1587.6	1562.8	1523.6	1473.3	1413.4	1356.8	1288.0	1228.1	1172.3
27.5°	1654.5	1651.9	1644.5	1621.2	1588.7	1538.8	1474.8	1402.7	1324.7	1243.7	1176.7
30°	1619.8	1620.1	1624.2	1621.6	1607.2	1575.0	1518.1	1445.6	1355.3	1262.2	1177.8
32.5°	1470.4	1480.3	1512.1	1527.3	1547.6	1554.3	1528.8	1468.5	1381.2	1280.6	1181.5
35°	1267.0	1291.4	1312.8	1357.2	1410.1	1453.3	1478.5	1458.9	1392.0	1293.2	1183.4
37.5°	1075.4	1073.6	1106.8	1154.9	1211.1	1284.7	1356.1	1395.3	1373.5	1290.6	1180.1
40°	876.4	893.5	914.2	956.7	1022.5	1113.1	1198.2	1282.1	1312.4	1267.7	1167.1
42.5°	740.4	748.1	768.8	802.1	849.4	941.9	1025.8	1133.8	1211.5	1216.7	1138.6
45°	636.1	644.6	650.5	683.4	727.4	789.5	875.7	984.4	1088.7	1133.8	1092.4
47.5°	552.5	557.3	570.2	590.2	619.1	674.2	742.9	841.7	955.2	1042.9	1028.8
50°	489.6	493.3	503.7	514.8	538.4	579.1	634.6	715.6	824.7	920.5	951.9
52.5°	434.2	439.0	444.1	454.9	476.7	504.0	549.2	612.4	713.7	811.7	861.7
55°	389.0	390.9	396.4	404.6	421.2	441.9	477.8	535.1	606.1	703.7	772.5
57.5°	349.8	348.0	353.9	359.5	370.5	387.9	413.8	456.3	524.0	607.2	679.0
60°	307.7	309.5	314.0	318.4	326.2	341.3	361.7	395.7	445.2	519.9	593.2
62.5°	271.4	272.9	274.0	280.3	287.3	298.1	314.7	342.4	383.5	445.2	510.7
65°	241.1	238.5	240.0	244.4	250.0	258.9	274.4	294.7	325.4	375.7	430.1
67.5°	205.6	206.4	206.7	209.3	214.1	222.6	233.7	250.4	275.5	315.1	362.8
70°	175.3	175.7	176.0	178.2	182.3	187.1	194.9	207.8	229.3	260.0	297.3
72.5°	144.2	145.7	145.7	147.6	150.5	153.1	160.5	171.2	187.5	211.9	243.3
75°	113.2	115.7	116.5	118.7	121.3	122.0	127.6	136.1	146.4	166.4	191.2
77.5°	88.0	88.0	89.5	92.1	92.1	94.3	100.2	103.9	112.1	125.7	144.6
80°	62.1	63.2	63.2	64.0	65.5	67.3	69.9	73.2	80.2	90.2	100.2
82.5°	40.7	41.0	41.4	43.3	42.5	44.4	45.5	49.6	52.9	57.7	64.0
85°	21.4	21.4	21.8	22.9	24.0	24.4	25.1	27.0	29.6	31.8	35.5
87.5°	8.9	8.5	8.5	9.2	9.2	9.6	10.0	10.7	12.2	12.2	13.7
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):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	911.9	911.9	911.9	911.9	911.9	911.9	911.9	911.9	911.9	911.9	911.9
2.5°	945.2	942.3	937.1	932.7	927.1	923.0	919.0	913.8	908.6	903.1	897.2
5°	982.9	974.1	964.1	954.1	942.3	932.7	922.3	910.5	900.5	889.4	877.6
7.5°	1026.2	1010.7	993.3	973.7	955.2	938.6	921.6	905.3	890.5	873.9	857.6
10°	1068.0	1041.0	1019.2	992.6	966.3	941.9	918.6	897.2	875.7	855.0	835.0
12.5°	1096.5	1065.8	1038.4	1007.7	977.0	946.3	915.6	886.1	860.5	835.4	814.3
15°	1116.1	1094.6	1058.4	1021.4	981.1	941.2	906.4	872.0	841.7	812.5	787.3
17.5°	1128.3	1100.5	1065.0	1026.2	981.8	940.1	898.3	857.2	822.5	791.0	762.5
20°	1131.6	1099.1	1062.1	1021.8	977.4	931.5	884.6	839.8	802.1	766.2	737.4
22.5°	1128.3	1090.6	1051.0	1011.8	965.2	918.6	869.4	820.6	777.3	740.4	710.0
25°	1122.7	1077.2	1035.8	989.6	946.3	902.0	851.3	799.5	754.4	715.9	681.9
27.5°	1115.7	1063.6	1012.5	967.0	920.1	876.4	829.8	777.0	730.0	687.8	656.0
30°	1107.6	1045.4	988.9	934.9	890.5	846.9	801.4	751.4	704.1	663.8	629.4
32.5°	1098.3	1026.2	959.7	901.6	854.3	813.9	771.4	723.7	677.1	633.9	603.9
35°	1085.4	1000.0	928.2	865.3	816.2	772.5	735.2	693.4	647.2	606.9	575.8
37.5°	1070.2	976.7	896.4	828.4	774.7	730.0	695.6	661.6	618.3	579.5	549.5
40°	1049.9	948.6	862.8	789.2	731.8	687.8	654.2	625.0	589.1	549.9	522.9
42.5°	1023.3	917.5	824.7	746.3	690.8	643.8	612.4	585.8	555.1	521.1	494.4
45°	992.9	882.0	782.1	705.2	644.9	600.2	569.5	545.5	522.2	491.8	467.1
47.5°	945.6	840.2	743.7	658.6	599.5	556.2	527.3	504.4	487.0	463.0	438.6
50°	889.4	792.9	698.2	612.8	552.9	511.1	483.7	463.7	448.9	430.5	412.0
52.5°	827.6	739.6	648.3	568.4	508.5	468.9	440.1	422.3	412.7	397.9	383.5
55°	755.5	679.7	594.7	521.8	463.0	422.7	397.9	385.3	374.6	367.2	354.3
57.5°	683.0	619.1	543.2	471.1	417.1	381.3	359.1	345.0	337.3	332.1	322.8
60°	603.9	553.6	484.1	421.6	373.5	339.5	319.9	308.4	301.4	298.4	292.1
62.5°	528.5	490.0	426.8	374.6	331.7	301.8	282.2	272.9	268.5	265.2	261.5
65°	454.1	423.8	373.9	325.1	288.8	261.8	246.3	238.9	235.6	231.9	231.5
67.5°	387.2	359.5	319.5	279.6	249.3	226.3	212.6	205.2	201.5	201.9	200.1
70°	321.4	299.9	267.4	234.8	208.9	190.8	177.9	173.1	171.6	171.2	169.7
72.5°	260.0	247.8	219.3	191.9	171.6	157.5	147.2	143.1	141.3	140.5	140.5
75°	206.0	197.1	172.7	152.0	136.5	125.0	118.0	115.0	112.4	113.9	112.8
77.5°	154.6	147.2	130.5	115.7	103.9	94.3	91.0	88.4	86.9	86.5	88.0
80°	108.7	104.3	93.9	82.1	73.2	67.7	65.5	63.2	62.1	61.4	62.1
82.5°	69.9	67.3	59.9	52.9	47.7	44.7	42.5	41.4	39.6	39.9	40.7
85°	38.1	37.4	32.5	30.3	25.5	25.1	23.7	22.6	22.9	22.2	23.3
87.5°	15.5	14.8	13.7	12.6	11.1	10.0	9.2	10.0	8.9	10.0	9.6
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°	911.9	911.9	911.9	911.9	911.9	911.9	911.9	911.9	911.9	911.9	911.9
2.5°	894.2	890.1	885.3	880.9	874.2	869.8	867.6	868.3	865.7	865.0	864.6
5°	870.5	861.3	852.4	845.0	837.2	828.4	822.1	820.2	819.5	817.6	813.6
7.5°	846.1	834.3	822.8	812.1	801.0	790.6	784.4	779.2	776.2	771.0	769.9
10°	820.2	805.8	793.6	778.1	764.8	754.0	745.9	741.5	738.9	734.1	730.0
12.5°	795.5	780.3	761.4	747.4	733.3	722.2	713.0	705.6	703.7	697.5	694.1
15°	768.8	750.3	733.3	717.1	703.7	689.7	684.1	677.5	670.8	665.3	664.2
17.5°	743.3	721.1	704.5	688.6	672.3	662.0	654.6	650.1	644.9	642.0	636.8
20°	712.6	694.5	676.0	661.2	647.2	638.3	628.3	624.2	620.5	613.5	611.3
22.5°	686.7	664.9	649.4	634.6	622.0	609.4	602.4	598.3	592.8	589.1	586.1
25°	659.7	641.6	622.0	607.2	596.5	583.9	579.1	573.9	569.1	565.8	562.8
27.5°	633.5	613.5	597.6	582.8	571.7	562.8	556.2	550.6	547.3	544.7	542.9
30°	606.1	587.6	572.8	559.1	546.6	539.2	532.9	530.7	527.0	525.1	522.2
32.5°	581.3	562.5	548.4	536.6	525.5	518.1	514.4	511.1	507.4	504.0	503.7
35°	553.2	537.0	524.0	511.1	502.9	497.0	493.0	489.6	486.7	484.1	482.6
37.5°	528.5	512.9	498.5	489.3	480.4	475.2	470.8	469.7	466.7	467.1	464.8
40°	501.8	487.8	475.6	466.3	460.4	454.9	451.9	448.2	446.4	446.7	444.9
42.5°	475.9	463.0	451.9	443.4	437.1	433.0	430.5	427.5	425.3	423.8	423.4
45°	449.7	438.2	429.0	420.5	415.3	411.6	408.3	404.6	402.7	402.0	401.6
47.5°	423.8	413.4	403.5	397.5	392.7	389.4	386.1	383.1	381.6	380.5	378.7
50°	397.2	386.8	379.8	372.4	368.3	363.9	360.2	358.7	356.9	356.5	358.3
52.5°	369.4	361.3	355.0	349.1	344.3	339.5	335.8	333.9	335.0	335.0	337.3
55°	343.2	334.7	328.8	324.0	318.8	314.3	310.6	310.6	310.6	312.9	315.8
57.5°	314.0	306.6	302.1	296.6	291.8	288.8	286.2	285.9	287.3	291.0	294.4
60°	284.4	279.2	274.4	270.0	265.2	262.9	262.6	261.8	264.0	267.7	274.8
62.5°	255.2	251.8	245.9	243.7	239.6	237.0	237.0	237.8	241.1	247.0	253.3
65°	227.1	222.3	217.8	215.6	213.0	210.8	210.8	213.7	218.6	224.1	231.9
67.5°	198.2	194.1	191.2	189.0	186.0	184.9	186.0	189.3	195.3	200.8	208.9
70°	167.2	166.4	163.8	160.9	159.4	159.4	160.5	164.2	168.6	177.1	184.2
72.5°	138.7	138.7	137.2	135.3	134.2	135.3	136.1	139.8	145.3	152.7	160.5
75°	112.8	111.7	110.6	109.8	109.5	110.2	111.3	114.3	120.9	128.0	134.2
77.5°	87.3	86.5	85.4	86.2	86.2	86.5	89.9	93.2	96.9	102.4	109.1
80°	62.9	63.2	62.1	61.8	63.6	64.3	66.9	69.5	72.1	78.4	83.2
82.5°	41.4	42.2	41.8	42.5	43.3	43.3	46.2	48.8	51.0	55.5	59.2
85°	23.7	24.0	24.0	25.1	25.9	25.5	28.1	29.6	30.7	34.0	36.2
87.5°	10.4	10.7	11.1	11.1	11.1	12.6	12.9	13.7	14.1	14.8	15.9
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: P243662

CATALOG NUMBER: S125DRP-H850D927-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	911.9	911.9	911.9	911.9
2.5°	861.3	860.9	862.8	863.9
5°	811.0	809.9	808.4	809.1
7.5°	766.2	763.3	762.5	762.5
10°	726.7	723.7	723.0	721.9
12.5°	693.0	688.6	686.7	684.9
15°	661.2	660.5	656.4	652.3
17.5°	632.0	633.1	629.0	627.2
20°	607.6	604.3	602.8	602.0
22.5°	582.8	580.2	580.2	577.6
25°	560.6	558.4	558.8	556.2
27.5°	539.9	539.5	539.2	538.4
30°	520.7	519.2	517.7	518.5
32.5°	502.2	500.0	498.9	498.5
35°	483.0	482.2	480.7	480.0
37.5°	464.1	464.5	462.6	462.3
40°	443.8	443.4	443.0	442.3
42.5°	422.3	421.2	422.0	421.6
45°	400.9	399.8	400.5	399.4
47.5°	379.8	380.5	380.5	380.9
50°	359.1	360.6	360.6	361.7
52.5°	339.9	342.8	342.8	342.4
55°	319.1	322.5	323.6	324.0
57.5°	299.5	302.9	306.2	306.9
60°	278.5	284.4	287.7	288.4
62.5°	259.6	265.2	269.6	270.0
65°	238.5	245.2	249.3	250.7
67.5°	217.1	222.3	227.8	230.0
70°	192.7	199.0	202.7	204.1
72.5°	167.2	174.2	179.0	179.7
75°	142.7	147.9	151.6	152.4
77.5°	115.0	120.2	123.5	124.3
80°	87.3	91.7	93.9	95.4
82.5°	61.8	64.7	65.8	67.3
85°	38.1	40.3	40.7	40.7
87.5°	16.6	17.0	17.0	17.8
90°	0.0	0.0	0.0	0.0

TEST NUMBER: P243662

CATALOG NUMBER: S125DRP-H850D927-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	17.33	18.90	17.69	19.21	19.53	17.07	18.64	17.44	18.96	19.27
	3H	18.68	20.10	19.06	20.42	20.78	18.50	19.91	18.87	20.24	20.60
	4H	19.16	20.49	19.56	20.84	21.21	18.98	20.31	19.38	20.66	21.04
	6H	19.47	20.70	19.88	21.06	21.45	19.30	20.53	19.71	20.89	21.28
	8H	19.55	20.72	19.97	21.11	21.51	19.38	20.55	19.80	20.94	21.34
	12H	19.58	20.70	20.01	21.08	21.51	19.42	20.54	19.85	20.92	21.35
4H	2H	18.72	20.04	19.12	20.39	20.77	18.13	19.46	18.53	19.81	20.19
	3H	20.08	21.18	20.49	21.58	21.98	19.79	20.90	20.20	21.30	21.70
	4H	20.58	21.58	21.01	21.99	22.43	20.35	21.35	20.78	21.76	22.20
	6H	20.93	21.80	21.39	22.24	22.70	20.73	21.60	21.18	22.04	22.50
	8H	21.02	21.83	21.48	22.28	22.74	20.82	21.63	21.28	22.08	22.54
	12H	21.07	21.80	21.55	22.28	22.75	20.88	21.61	21.36	22.08	22.55
8H	4H	21.03	21.85	21.50	22.29	22.76	20.70	21.52	21.17	21.96	22.42
	6H	21.46	22.14	21.96	22.63	23.10	21.21	21.88	21.70	22.37	22.84
	8H	21.59	22.19	22.10	22.70	23.19	21.35	21.95	21.86	22.46	22.95
	12H	21.68	22.21	22.19	22.70	23.27	21.45	21.98	21.96	22.48	23.04
12H	4H	21.08	21.80	21.56	22.28	22.75	20.72	21.45	21.20	21.93	22.40
	6H	21.53	22.14	22.05	22.65	23.13	21.25	21.86	21.76	22.37	22.85
	8H	21.71	22.24	22.22	22.73	23.30	21.46	21.99	21.97	22.48	23.04