

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: P243666

Luminaire Tested: S125DRP-H610D830-X4F0-XX-UDD-A-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P243666
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-H610D830-X4F0-XX-UDD-A-W
Description: DEFINE 5 DIRECT RECESSED WITH ASYMMETRIC FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

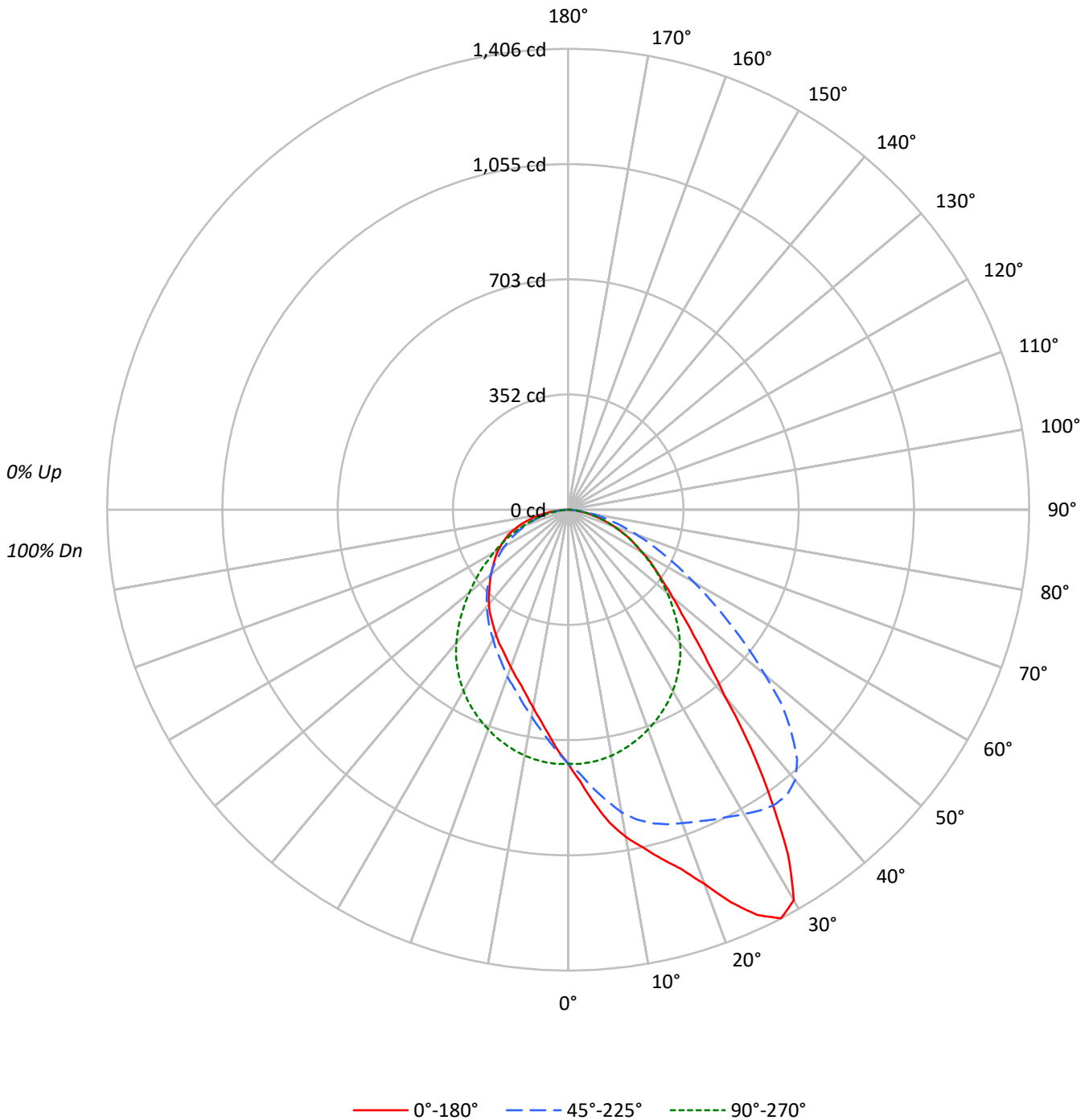
Lumens per Lamp: N/A
Luminaire Lumens: 2208.1 lumens
Efficiency: N/A
Efficacy: 128.4 lumens/watt
Spacing Criteria (0/90/45): 1.43 / 1.22 / 1.53
Luminous Opening: Rectangular (W 3.88' x L: 0.39' x H: 0')
CIE Type: Direct

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°	5507	5507	5507	5507	5507
5°	6397	6074	5519	5021	4904
10°	7319	6764	5501	4623	4426
15°	8114	7287	5451	4311	4078
20°	9187	7697	5397	4102	3869
25°	10697	8182	5326	3890	3705
30°	11293	8800	5239	3760	3615
35°	9339	9533	5111	3664	3538
40°	6908	9992	4927	3585	3487
45°	5432	9682	4658	3515	3410
50°	4600	8647	4356	3418	3398
55°	4095	7409	4057	3308	3410
60°	3716	6279	3724	3176	3484
65°	3444	5368	3414	3012	3582
70°	3094	4590	3055	2814	3603
75°	2639	3883	2683	2570	3553
80°	2161	3139	2198	2239	3319
85°	1484	2202	1566	1770	2822

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 9682 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	74.8	3.4
10°-20°	223.6	10.1
20°-30°	363.6	16.5
30°-40°	442.4	20.0
40°-50°	404.8	18.3
50°-60°	323.9	14.7
60°-70°	225.6	10.2
70°-80°	119.9	5.4
80°-90°	29.4	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°	662.1	30.0
0°-40°	1104.4	50.0
0°-60°	1833.1	83.0
0°-90°	2208.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2208.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	775	775	775	775	775	
5°	897	851	774	704	687	89
15°	1103	990	741	586	554	316
25°	1364	1043	679	496	472	623
35°	1076	1099	589	422	408	667
45°	540	963	463	350	339	426
55°	330	598	327	267	275	298
65°	205	319	203	179	213	202
75°	96	141	98	94	129	104
85°	18	27	19	22	35	24
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°	774.8	774.8	774.8	774.8	774.8	774.8	774.8	774.8	774.8	774.8	774.8
2.5°	829.4	826.0	825.0	825.3	823.5	821.9	818.1	813.1	809.6	805.2	804.0
5°	896.7	888.2	889.7	887.2	883.1	877.8	873.1	865.6	858.3	851.4	842.3
7.5°	962.6	961.1	956.7	956.0	949.4	940.3	930.9	920.5	905.1	894.5	882.2
10°	1014.2	1017.3	1011.0	1011.3	999.7	990.6	982.4	968.9	951.6	937.2	919.3
12.5°	1055.6	1056.9	1055.9	1051.9	1044.3	1028.9	1021.1	1006.9	988.1	968.3	954.5
15°	1102.8	1099.3	1094.0	1088.9	1077.9	1066.9	1050.6	1034.0	1010.1	990.3	970.2
17.5°	1149.9	1149.3	1142.7	1132.0	1118.1	1103.7	1079.2	1057.8	1032.4	1006.3	981.2
20°	1214.6	1211.1	1201.4	1189.2	1163.7	1143.3	1112.8	1083.6	1050.3	1017.6	988.4
22.5°	1295.7	1284.3	1274.6	1255.8	1226.5	1191.0	1156.8	1114.4	1067.9	1029.6	993.1
25°	1364.1	1359.1	1348.8	1327.7	1294.4	1251.7	1200.8	1152.7	1094.3	1043.4	995.9
27.5°	1405.6	1403.4	1397.1	1377.3	1349.7	1307.3	1252.9	1191.7	1125.4	1056.6	999.7
30°	1376.1	1376.4	1379.9	1377.7	1365.4	1338.1	1289.7	1228.1	1151.5	1072.3	1000.6
32.5°	1249.2	1257.6	1284.7	1297.5	1314.8	1320.5	1298.8	1247.6	1173.4	1088.0	1003.8
35°	1076.4	1097.1	1115.3	1153.0	1197.9	1234.7	1256.1	1239.4	1182.6	1098.7	1005.4
37.5°	913.6	912.1	940.3	981.2	1028.9	1091.4	1152.1	1185.4	1166.8	1096.5	1002.5
40°	744.6	759.0	776.6	812.8	868.7	945.7	1017.9	1089.2	1115.0	1077.0	991.5
42.5°	629.0	635.6	653.2	681.4	721.7	800.2	871.5	963.3	1029.2	1033.6	967.3
45°	540.4	547.6	552.6	580.6	618.0	670.8	744.0	836.3	924.9	963.3	928.1
47.5°	469.4	473.5	484.5	501.4	525.9	572.7	631.2	715.1	811.5	886.0	874.0
50°	416.0	419.1	427.9	437.3	457.4	492.0	539.1	607.9	700.6	782.0	808.7
52.5°	368.8	372.9	377.3	386.4	405.0	428.2	466.6	520.3	606.4	689.6	732.0
55°	330.5	332.1	336.8	343.7	357.8	375.4	405.9	454.6	514.9	597.9	656.3
57.5°	297.2	295.6	300.7	305.4	314.8	329.6	351.6	387.7	445.2	515.9	576.8
60°	261.4	263.0	266.7	270.5	277.1	290.0	307.3	336.2	378.3	441.7	503.9
62.5°	230.6	231.9	232.8	238.1	244.1	253.2	267.4	290.9	325.8	378.3	433.9
65°	204.8	202.6	203.9	207.7	212.4	219.9	233.1	250.4	276.5	319.2	365.4
67.5°	174.7	175.3	175.6	177.8	181.9	189.1	198.6	212.7	234.1	267.7	308.2
70°	148.9	149.2	149.5	151.4	154.9	159.0	165.6	176.6	194.8	220.9	252.6
72.5°	122.5	123.8	123.8	125.4	127.9	130.1	136.4	145.5	159.3	180.0	206.7
75°	96.1	98.3	99.0	100.9	103.0	103.7	108.4	115.6	124.4	141.4	162.4
77.5°	74.8	74.8	76.0	78.2	78.2	80.1	85.1	88.3	95.2	106.8	122.8
80°	52.8	53.7	53.7	54.4	55.6	57.2	59.4	62.2	68.2	76.7	85.1
82.5°	34.6	34.9	35.2	36.8	36.1	37.7	38.6	42.1	44.9	49.0	54.4
85°	18.2	18.2	18.5	19.5	20.4	20.7	21.4	22.9	25.1	27.0	30.2
87.5°	7.5	7.2	7.2	7.9	7.9	8.2	8.5	9.1	10.4	10.4	11.6
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):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	774.8	774.8	774.8	774.8	774.8	774.8	774.8	774.8	774.8	774.8	774.8
2.5°	803.0	800.5	796.1	792.3	787.6	784.2	780.7	776.3	771.9	767.2	762.2
5°	835.1	827.5	819.1	810.6	800.5	792.3	783.6	773.5	765.0	755.6	745.5
7.5°	871.8	858.6	843.9	827.2	811.5	797.4	782.9	769.1	756.5	742.4	728.6
10°	907.3	884.4	865.9	843.2	820.9	800.2	780.4	762.2	744.0	726.4	709.4
12.5°	931.5	905.5	882.2	856.1	830.1	804.0	777.9	752.8	731.1	709.7	691.8
15°	948.2	930.0	899.2	867.8	833.5	799.6	770.0	740.8	715.1	690.2	668.9
17.5°	958.5	935.0	904.8	871.8	834.1	798.6	763.1	728.3	698.7	672.0	647.8
20°	961.4	933.7	902.3	868.1	830.4	791.4	751.5	713.5	681.4	651.0	626.5
22.5°	958.5	926.5	892.9	859.6	820.0	780.4	738.6	697.2	660.4	629.0	603.2
25°	953.8	915.2	880.0	840.7	804.0	766.3	723.2	679.2	640.9	608.2	579.3
27.5°	947.9	903.6	860.2	821.6	781.7	744.6	705.0	660.1	620.2	584.4	557.3
30°	941.0	888.2	840.1	794.2	756.5	719.5	680.8	638.4	598.2	563.9	534.7
32.5°	933.1	871.8	815.3	766.0	725.7	691.5	655.4	614.8	575.3	538.5	513.0
35°	922.1	849.5	788.6	735.2	693.4	656.3	624.6	589.1	549.8	515.6	489.2
37.5°	909.2	829.7	761.6	703.8	658.2	620.2	591.0	562.1	525.3	492.3	466.9
40°	891.9	805.9	733.0	670.4	621.8	584.4	555.8	531.0	500.5	467.2	444.2
42.5°	869.3	779.5	700.6	634.0	586.9	547.0	520.3	497.7	471.6	442.7	420.1
45°	843.6	749.3	664.5	599.1	547.9	509.9	483.8	463.4	443.6	417.9	396.8
47.5°	803.3	713.8	631.8	559.5	509.3	472.5	448.0	428.5	413.8	393.3	372.6
50°	755.6	673.6	593.2	520.6	469.7	434.2	410.9	394.0	381.4	365.7	350.0
52.5°	703.1	628.4	550.7	482.9	432.0	398.4	373.9	358.8	350.6	338.1	325.8
55°	641.9	577.5	505.2	443.3	393.3	359.1	338.1	327.4	318.3	312.0	301.0
57.5°	580.3	525.9	461.5	400.3	354.4	323.9	305.1	293.1	286.5	282.1	274.3
60°	513.0	470.3	411.3	358.2	317.3	288.4	271.8	262.0	256.1	253.5	248.2
62.5°	449.0	416.3	362.6	318.3	281.8	256.4	239.7	231.9	228.1	225.3	222.1
65°	385.8	360.0	317.6	276.2	245.4	222.4	209.2	203.0	200.1	197.0	196.7
67.5°	328.9	305.4	271.4	237.5	211.8	192.3	180.7	174.4	171.2	171.5	170.0
70°	273.0	254.8	227.1	199.5	177.5	162.1	151.1	147.0	145.8	145.5	144.2
72.5°	220.9	210.5	186.3	163.1	145.8	133.8	125.0	121.6	120.0	119.4	119.4
75°	175.0	167.5	146.7	129.1	115.9	106.2	100.2	97.7	95.5	96.8	95.8
77.5°	131.3	125.0	110.9	98.3	88.3	80.1	77.3	75.1	73.8	73.5	74.8
80°	92.4	88.6	79.8	69.7	62.2	57.5	55.6	53.7	52.8	52.2	52.8
82.5°	59.4	57.2	50.9	44.9	40.5	38.0	36.1	35.2	33.6	33.9	34.6
85°	32.4	31.7	27.6	25.8	21.7	21.4	20.1	19.2	19.5	18.9	19.8
87.5°	13.2	12.6	11.6	10.7	9.4	8.5	7.9	8.5	7.5	8.5	8.2
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°	774.8	774.8	774.8	774.8	774.8	774.8	774.8	774.8	774.8	774.8	774.8
2.5°	759.7	756.2	752.1	748.4	742.7	738.9	737.1	737.7	735.5	734.9	734.5
5°	739.6	731.7	724.2	717.9	711.3	703.8	698.4	696.8	696.2	694.6	691.2
7.5°	718.8	708.8	699.0	689.9	680.5	671.7	666.4	662.0	659.5	655.1	654.1
10°	696.8	684.6	674.2	661.0	649.7	640.6	633.7	629.9	627.7	623.6	620.2
12.5°	675.8	662.9	646.9	634.9	623.0	613.6	605.7	599.4	597.9	592.5	589.7
15°	653.2	637.5	623.0	609.2	597.9	585.9	581.2	575.6	569.9	565.2	564.3
17.5°	631.5	612.6	598.5	585.0	571.2	562.4	556.1	552.3	547.9	545.4	541.0
20°	605.4	590.0	574.3	561.7	549.8	542.3	533.8	530.3	527.2	521.2	519.3
22.5°	583.4	564.9	551.7	539.1	528.4	517.8	511.8	508.3	503.6	500.5	498.0
25°	560.5	545.1	528.4	515.9	506.8	496.1	492.0	487.6	483.5	480.7	478.2
27.5°	538.2	521.2	507.7	495.1	485.7	478.2	472.5	467.8	465.0	462.8	461.2
30°	514.9	499.2	486.7	475.0	464.4	458.1	452.7	450.8	447.7	446.1	443.6
32.5°	493.9	477.9	465.9	455.9	446.4	440.2	437.0	434.2	431.0	428.2	427.9
35°	470.0	456.2	445.2	434.2	427.3	422.3	418.8	416.0	413.5	411.3	410.0
37.5°	449.0	435.8	423.5	415.7	408.1	403.7	399.9	399.0	396.5	396.8	394.9
40°	426.3	414.4	404.0	396.2	391.1	386.4	383.9	380.8	379.2	379.5	378.0
42.5°	404.3	393.3	383.9	376.7	371.4	367.9	365.7	363.2	361.3	360.0	359.7
45°	382.0	372.3	364.4	357.2	352.8	349.7	346.8	343.7	342.1	341.5	341.2
47.5°	360.0	351.2	342.8	337.7	333.7	330.8	328.0	325.5	324.2	323.3	321.7
50°	337.4	328.6	322.7	316.4	312.9	309.1	306.0	304.7	303.2	302.9	304.4
52.5°	313.9	306.9	301.6	296.6	292.5	288.4	285.3	283.7	284.6	284.6	286.5
55°	291.6	284.3	279.3	275.2	270.8	267.0	263.9	263.9	263.9	265.8	268.3
57.5°	266.7	260.5	256.7	252.0	247.9	245.4	243.2	242.9	244.1	247.3	250.1
60°	241.6	237.2	233.1	229.3	225.3	223.4	223.1	222.4	224.3	227.5	233.4
62.5°	216.8	214.0	208.9	207.0	203.6	201.4	201.4	202.0	204.8	209.9	215.2
65°	192.9	188.8	185.0	183.2	181.0	179.1	179.1	181.6	185.7	190.4	197.0
67.5°	168.4	164.9	162.4	160.5	158.0	157.1	158.0	160.9	165.9	170.6	177.5
70°	142.0	141.4	139.2	136.7	135.4	135.4	136.4	139.5	143.3	150.5	156.5
72.5°	117.8	117.8	116.6	115.0	114.0	115.0	115.6	118.8	123.5	129.8	136.4
75°	95.8	94.9	93.9	93.3	93.0	93.6	94.6	97.1	102.7	108.7	114.0
77.5°	74.1	73.5	72.6	73.2	73.2	73.5	76.3	79.2	82.3	87.0	92.7
80°	53.4	53.7	52.8	52.5	54.0	54.7	56.9	59.1	61.3	66.6	70.7
82.5°	35.2	35.8	35.5	36.1	36.8	36.8	39.3	41.5	43.4	47.1	50.3
85°	20.1	20.4	20.4	21.4	22.0	21.7	23.9	25.1	26.1	28.9	30.8
87.5°	8.8	9.1	9.4	9.4	9.4	10.7	11.0	11.6	11.9	12.6	13.5
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: P243666

CATALOG NUMBER: S125DRP-H610D830-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	774.8	774.8	774.8	774.8
2.5°	731.7	731.4	733.0	733.9
5°	689.0	688.0	686.8	687.4
7.5°	651.0	648.5	647.8	647.8
10°	617.4	614.8	614.2	613.3
12.5°	588.8	585.0	583.4	581.9
15°	561.7	561.1	557.7	554.2
17.5°	536.9	537.9	534.4	532.8
20°	516.2	513.4	512.1	511.5
22.5°	495.1	492.9	492.9	490.7
25°	476.3	474.4	474.7	472.5
27.5°	458.7	458.4	458.1	457.4
30°	442.4	441.1	439.8	440.5
32.5°	426.6	424.8	423.8	423.5
35°	410.3	409.7	408.4	407.8
37.5°	394.3	394.6	393.0	392.7
40°	377.0	376.7	376.4	375.8
42.5°	358.8	357.8	358.5	358.2
45°	340.6	339.6	340.3	339.3
47.5°	322.7	323.3	323.3	323.6
50°	305.1	306.3	306.3	307.3
52.5°	288.7	291.2	291.2	290.9
55°	271.1	274.0	274.9	275.2
57.5°	254.5	257.3	260.1	260.8
60°	236.6	241.6	244.4	245.1
62.5°	220.6	225.3	229.0	229.3
65°	202.6	208.3	211.8	213.0
67.5°	184.4	188.8	193.5	195.4
70°	163.7	169.0	172.2	173.4
72.5°	142.0	148.0	152.1	152.7
75°	121.3	125.7	128.8	129.4
77.5°	97.7	102.1	104.9	105.6
80°	74.1	77.9	79.8	81.1
82.5°	52.5	55.0	55.9	57.2
85°	32.4	34.2	34.6	34.6
87.5°	14.1	14.5	14.5	15.1
90°	0.0	0.0	0.0	0.0



TEST NUMBER: P243666
 CATALOG NUMBER: S125DRP-H610D830-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	16.76	18.33	17.13	18.65	18.96	16.50	18.08	16.87	18.39	18.70
	3H	18.12	19.53	18.49	19.86	20.22	17.93	19.34	18.31	19.67	20.03
	4H	18.60	19.92	18.99	20.27	20.65	18.42	19.74	18.82	20.09	20.47
	6H	18.90	20.13	19.32	20.50	20.89	18.73	19.96	19.14	20.33	20.72
	8H	18.98	20.15	19.41	20.54	20.94	18.81	19.98	19.24	20.37	20.77
	12H	19.01	20.14	19.44	20.52	20.95	18.85	19.97	19.28	20.35	20.78
4H	2H	18.15	19.48	18.55	19.83	20.20	17.57	18.89	17.97	19.24	19.62
	3H	19.51	20.62	19.92	21.01	21.41	19.22	20.33	19.63	20.73	21.13
	4H	20.01	21.01	20.45	21.42	21.86	19.78	20.78	20.22	21.19	21.63
	6H	20.37	21.23	20.82	21.68	22.13	20.16	21.03	20.62	21.47	21.93
	8H	20.46	21.27	20.92	21.71	22.18	20.26	21.07	20.72	21.51	21.98
	12H	20.51	21.23	20.99	21.71	22.18	20.31	21.04	20.79	21.52	21.99
8H	4H	20.47	21.28	20.93	21.72	22.19	20.14	20.95	20.60	21.39	21.86
	6H	20.90	21.57	21.39	22.06	22.54	20.64	21.31	21.13	21.80	22.28
	8H	21.03	21.63	21.54	22.14	22.62	20.78	21.39	21.30	21.90	22.38
	12H	21.11	21.64	21.62	22.14	22.70	20.88	21.42	21.39	21.91	22.47
12H	4H	20.51	21.24	20.99	21.71	22.18	20.16	20.88	20.64	21.36	21.83
	6H	20.97	21.57	21.48	22.08	22.57	20.69	21.29	21.20	21.80	22.29
	8H	21.14	21.68	21.65	22.17	22.73	20.89	21.42	21.40	21.92	22.48