

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: P242806

Luminaire Tested: S125DRP-S610D830-X4F0-XX-UDD-A-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P242806
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-S610D830-X4F0-XX-UDD-A-W
Description: DEFINE 5 DIRECT RECESSED WITH ASYMMETRIC FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

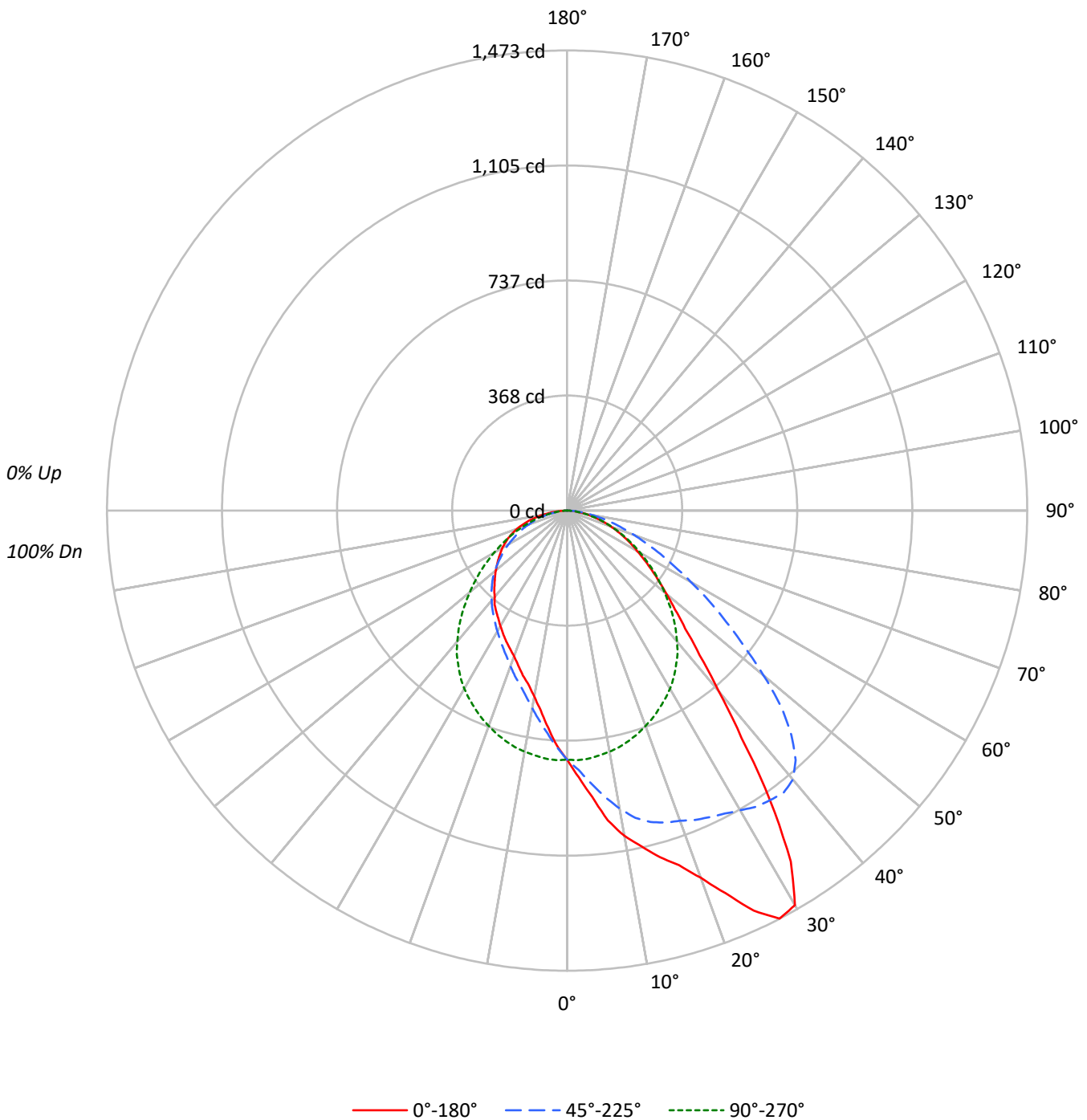
Lumens per Lamp: N/A
Luminaire Lumens: 2249.7 lumens
Efficiency: N/A
Efficacy: 119.7 lumens/watt
Spacing Criteria (0/90/45): 1.43 / 1.23 / 1.53
Luminous Opening: Rectangular (W 3.88' x L: 0.39' x H: 0')
CIE Type: Direct

Input Watts (W): 18.8
Input Voltage (V): 120
Input Current (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	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°	5666	5666	5666	5666	5666
5°	6562	6250	5685	5113	4978
10°	7633	6989	5656	4633	4361
15°	8450	7596	5614	4257	4023
20°	9459	7990	5549	4010	3751
25°	11081	8488	5475	3803	3619
30°	11969	9092	5401	3663	3504
35°	9841	9820	5264	3567	3429
40°	6995	10429	5073	3488	3347
45°	5373	10206	4816	3418	3299
50°	4586	9080	4497	3334	3293
55°	4084	7711	4185	3212	3321
60°	3684	6513	3844	3097	3406
65°	3402	5548	3500	2941	3495
70°	3094	4717	3144	2743	3543
75°	2732	4034	2768	2526	3512
80°	2300	3311	2259	2145	3213
85°	1819	2398	1631	1770	2593

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 10206 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	76.7	3.4
10°-20°	228.5	10.2
20°-30°	371.2	16.5
30°-40°	453.7	20.2
40°-50°	411.6	18.3
50°-60°	327.8	14.6
60°-70°	228.3	10.1
70°-80°	121.6	5.4
80°-90°	30.2	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°	676.5	30.1
0°-40°	1130.2	50.2
0°-60°	1869.6	83.1
0°-90°	2249.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2249.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	797	797	797	797	797	
5°	920	876	797	717	698	92
15°	1148	1032	763	579	547	328
25°	1413	1082	698	485	462	647
35°	1134	1132	607	411	395	696
45°	535	1015	479	340	328	425
55°	330	622	338	259	268	296
65°	202	330	208	175	208	201
75°	100	147	101	92	128	107
85°	22	29	20	22	32	26
90°	0	0	0	0	0	



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CATALOG NUMBER: S125DRP-S610D830-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	797.2	797.2	797.2	797.2	797.2	797.2	797.2	797.2	797.2	797.2	797.2
2.5°	854.7	853.4	852.0	849.3	851.3	845.6	842.9	838.1	832.4	830.4	828.0
5°	919.7	921.4	923.1	916.0	916.6	911.9	901.1	892.3	885.2	876.0	869.6
7.5°	1000.2	995.1	995.5	991.1	983.3	976.9	966.4	951.8	938.6	923.7	910.9
10°	1057.7	1058.1	1055.0	1049.6	1041.2	1035.1	1020.2	1006.0	988.7	968.4	953.9
12.5°	1101.1	1102.7	1098.7	1090.9	1087.9	1072.3	1061.5	1043.9	1022.6	1007.3	983.3
15°	1148.4	1144.7	1142.0	1132.9	1125.8	1111.5	1092.9	1075.3	1053.0	1032.4	1011.7
17.5°	1190.4	1193.4	1189.0	1182.3	1161.3	1144.7	1121.7	1099.4	1072.6	1046.9	1022.9
20°	1250.6	1253.3	1245.5	1231.0	1204.6	1188.0	1155.2	1124.1	1091.9	1056.4	1029.3
22.5°	1325.7	1322.3	1311.2	1287.2	1265.2	1231.0	1194.8	1155.2	1112.9	1071.6	1033.4
25°	1413.0	1398.8	1392.4	1365.0	1334.9	1289.9	1241.1	1185.6	1135.6	1082.4	1036.4
27.5°	1472.6	1466.8	1457.7	1435.4	1400.8	1349.8	1292.2	1225.9	1158.6	1093.6	1035.7
30°	1458.4	1459.0	1459.7	1453.6	1433.3	1397.1	1339.9	1267.2	1183.3	1107.8	1038.1
32.5°	1332.5	1347.7	1362.3	1381.2	1393.4	1393.7	1363.3	1299.3	1212.4	1124.1	1036.8
35°	1134.2	1137.9	1176.2	1214.1	1265.5	1305.4	1332.2	1303.1	1230.3	1131.8	1035.7
37.5°	917.0	935.6	964.4	1007.0	1084.1	1147.1	1229.6	1258.1	1223.9	1138.3	1035.4
40°	753.9	770.8	788.1	831.7	894.3	974.8	1072.0	1154.9	1174.1	1124.1	1025.3
42.5°	628.0	640.5	660.2	690.3	740.0	809.0	900.7	1015.4	1093.9	1082.8	1003.9
45°	534.6	543.1	558.0	584.0	621.9	677.8	759.6	878.1	981.3	1015.4	967.7
47.5°	468.3	468.6	480.8	499.4	528.2	579.6	640.9	738.3	849.6	928.5	917.3
50°	414.8	413.1	422.3	437.8	459.5	491.0	548.8	622.9	728.8	821.2	846.9
52.5°	368.8	369.5	374.2	384.7	402.0	427.7	467.3	532.3	618.9	714.3	768.4
55°	329.6	328.2	334.6	342.4	355.6	373.2	404.4	455.4	528.9	622.3	685.2
57.5°	291.7	295.4	298.1	303.5	315.0	327.2	354.9	394.2	454.8	537.7	604.3
60°	259.2	262.9	264.9	270.4	279.2	289.3	309.6	340.1	389.1	458.2	524.1
62.5°	230.1	232.8	233.1	237.9	244.6	254.5	269.3	293.7	329.9	388.1	452.4
65°	202.3	202.3	203.7	208.8	212.2	221.0	233.1	251.7	282.9	329.9	385.1
67.5°	175.3	177.0	176.6	179.0	182.0	189.5	198.6	214.2	238.9	274.4	320.1
70°	148.9	150.2	149.9	151.6	155.0	159.4	166.5	181.0	197.6	227.0	264.9
72.5°	125.2	125.5	124.5	126.9	128.6	132.3	140.4	146.5	161.7	185.4	214.9
75°	99.5	100.2	100.8	102.2	104.2	106.2	110.3	118.1	128.2	146.9	166.8
77.5°	79.2	77.5	79.5	79.2	80.2	81.9	85.6	90.0	98.8	111.3	127.9
80°	56.2	56.5	56.5	56.8	58.5	59.6	62.6	65.6	72.1	80.9	91.7
82.5°	37.2	38.2	37.6	38.2	39.6	40.3	41.6	44.0	47.0	53.5	60.6
85°	22.3	20.6	21.3	22.0	22.0	22.3	23.7	24.7	26.7	29.4	32.5
87.5°	8.1	8.8	9.1	9.1	9.5	9.5	10.8	10.8	11.8	12.9	14.2
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):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	797.2	797.2	797.2	797.2	797.2	797.2	797.2	797.2	797.2	797.2	797.2
2.5°	826.0	823.6	820.9	816.1	810.4	807.3	802.6	799.6	793.5	788.4	783.0
5°	861.8	853.0	844.9	834.4	822.9	815.5	806.7	796.9	786.7	776.2	764.7
7.5°	897.7	883.1	867.2	850.7	834.4	819.2	805.0	790.4	777.2	760.7	746.8
10°	933.9	914.3	893.3	868.6	844.6	823.6	802.3	783.7	764.7	744.4	726.5
12.5°	970.1	942.4	910.6	882.8	852.7	826.3	800.2	775.2	750.2	727.2	705.5
15°	983.3	960.3	932.9	894.3	861.8	827.0	793.8	763.0	734.3	709.2	682.8
17.5°	996.2	966.7	937.6	900.4	858.1	820.5	783.0	749.5	717.7	686.2	662.2
20°	999.2	968.8	938.0	901.8	858.1	813.4	775.9	733.6	698.7	665.9	634.8
22.5°	998.2	962.7	928.5	890.9	848.6	808.4	761.0	717.7	679.1	647.0	614.1
25°	990.7	953.9	911.9	874.3	832.4	788.7	742.7	698.1	659.5	622.6	590.5
27.5°	986.3	939.7	893.6	850.3	810.1	769.8	725.1	679.1	636.8	599.3	569.5
30°	976.5	924.1	870.6	824.9	783.3	744.4	702.8	658.1	613.5	576.9	544.4
32.5°	967.7	904.5	847.3	796.5	751.9	714.3	676.7	634.8	591.1	553.9	521.4
35°	955.9	885.2	820.5	764.4	717.3	678.4	646.3	606.7	566.4	530.6	499.4
37.5°	942.0	860.1	791.8	733.2	682.2	641.5	611.1	580.3	540.0	504.8	477.1
40°	925.1	833.1	759.6	699.4	645.9	603.3	575.6	546.8	514.7	482.5	452.7
42.5°	903.8	808.7	727.2	661.2	608.4	567.1	537.7	514.3	486.9	457.5	430.4
45°	876.7	778.2	691.6	621.9	568.5	527.5	497.4	479.1	457.8	429.4	406.0
47.5°	840.8	743.7	654.4	582.3	527.2	489.3	460.5	442.6	427.0	404.7	382.7
50°	789.8	704.1	613.5	542.1	486.9	448.7	422.6	406.7	393.9	377.6	359.7
52.5°	732.6	654.4	573.2	502.8	448.3	410.8	385.4	371.9	361.7	351.2	333.6
55°	671.3	603.7	526.5	459.5	409.1	372.2	349.9	337.7	328.9	320.1	309.3
57.5°	605.3	550.5	479.8	417.2	370.5	336.0	315.0	302.5	295.4	290.7	283.9
60°	535.0	489.6	430.7	374.9	329.6	299.8	279.5	270.4	264.6	260.9	256.1
62.5°	469.7	434.5	381.0	331.3	293.0	265.3	247.7	238.9	233.5	232.1	228.4
65°	405.7	376.9	331.9	289.6	255.8	231.8	216.6	208.1	204.7	202.7	203.0
67.5°	341.4	322.8	285.2	248.0	220.3	199.0	186.4	180.0	178.3	175.3	175.3
70°	283.6	270.4	239.9	208.4	184.4	168.8	158.0	151.3	149.6	148.2	147.9
72.5°	232.5	221.3	195.9	172.2	151.3	138.1	129.6	126.2	123.2	122.5	122.5
75°	182.4	176.0	155.0	135.0	120.1	110.6	104.6	100.8	98.8	98.5	98.8
77.5°	137.7	131.6	117.1	102.2	92.4	84.9	79.2	78.2	75.5	75.8	75.1
80°	97.5	93.7	85.3	74.1	66.3	60.2	57.5	55.2	54.5	53.5	54.5
82.5°	64.0	59.9	54.8	48.7	42.6	39.6	36.9	36.5	36.2	35.9	35.9
85°	34.9	35.2	31.8	26.4	23.7	21.7	20.0	20.0	19.6	19.3	19.6
87.5°	14.9	14.2	12.9	11.8	10.2	9.1	8.8	9.1	8.1	7.8	8.1
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°	797.2	797.2	797.2	797.2	797.2	797.2	797.2	797.2	797.2	797.2	797.2
2.5°	779.9	776.2	773.2	766.4	762.7	757.6	753.5	757.9	753.2	755.2	752.2
5°	759.0	749.5	742.7	732.9	724.4	716.7	710.9	709.9	707.2	705.8	701.8
7.5°	733.9	723.1	711.9	699.7	689.6	678.8	672.3	666.2	662.5	657.8	654.1
10°	712.3	696.4	682.8	667.3	653.7	641.9	632.4	627.7	623.3	616.8	614.5
12.5°	685.5	669.0	651.7	634.8	621.9	608.4	600.6	592.8	590.1	582.7	582.3
15°	665.2	640.5	624.3	607.4	589.4	578.6	571.8	564.1	560.7	555.6	551.9
17.5°	640.2	617.9	597.6	580.3	564.1	555.3	546.5	541.1	535.3	531.6	525.5
20°	612.4	591.5	571.2	552.6	540.7	530.2	523.5	518.4	512.3	510.6	504.5
22.5°	589.1	565.4	546.1	531.2	518.0	505.9	498.4	495.4	491.7	485.6	485.6
25°	563.4	539.4	522.8	507.2	495.7	484.9	479.8	475.4	471.3	467.6	466.3
27.5°	541.7	520.4	500.1	485.9	476.1	465.9	461.5	455.8	452.7	449.7	445.6
30°	518.7	496.7	479.5	465.9	455.1	446.3	441.6	437.8	435.1	432.4	430.4
32.5°	495.0	475.1	458.5	445.3	434.5	428.4	424.3	421.9	418.9	415.5	412.8
35°	474.7	452.4	436.2	424.7	416.2	411.1	406.4	404.0	400.6	400.6	397.9
37.5°	450.7	431.1	416.5	406.0	398.6	393.9	388.4	387.1	384.7	383.4	382.4
40°	429.7	411.8	398.3	387.8	379.7	375.9	371.9	369.2	367.8	366.1	365.4
42.5°	408.1	391.2	378.3	368.8	362.1	359.0	355.3	353.6	350.6	348.2	347.8
45°	386.1	369.5	357.7	349.9	343.8	340.1	337.7	333.6	332.3	329.6	329.2
47.5°	365.8	349.5	337.7	331.3	325.8	323.1	319.4	315.0	313.3	311.6	311.3
50°	342.4	327.9	317.1	311.0	305.9	301.5	297.8	295.1	294.0	294.0	294.7
52.5°	318.7	306.9	298.1	290.3	285.6	280.8	277.5	276.1	274.4	276.4	277.8
55°	295.7	283.2	276.4	269.3	264.6	259.2	257.5	256.8	255.8	258.5	259.9
57.5°	271.0	262.6	254.5	247.0	242.9	239.6	236.9	236.5	238.6	239.2	243.3
60°	247.7	237.5	230.4	225.0	219.9	217.9	217.2	216.6	217.9	221.6	227.4
62.5°	222.0	214.2	206.4	202.7	199.3	195.6	195.6	196.3	199.3	203.7	209.5
65°	196.9	189.8	184.7	180.0	177.0	174.9	175.6	177.0	180.0	185.8	192.2
67.5°	171.2	166.5	161.7	157.3	154.3	154.6	155.0	156.7	160.4	167.2	173.2
70°	146.5	141.1	137.4	135.7	133.3	132.0	134.0	137.4	140.4	146.5	151.6
72.5°	121.8	117.4	114.7	113.7	113.0	112.0	112.3	116.1	120.5	126.6	132.6
75°	97.5	95.8	93.7	92.4	91.4	92.0	92.7	96.1	99.5	105.9	112.7
77.5°	75.5	73.4	72.1	71.7	71.1	71.4	73.1	75.8	79.2	83.9	89.3
80°	53.8	53.1	52.4	52.1	52.1	52.4	55.2	56.8	59.9	64.3	68.4
82.5°	35.5	35.2	35.2	35.2	35.5	35.5	36.9	39.3	41.6	44.7	48.0
85°	20.6	20.0	21.0	21.3	20.6	21.7	22.3	23.7	24.7	26.4	28.1
87.5°	8.5	9.1	8.8	9.1	9.1	9.8	9.5	10.8	11.5	12.2	11.8
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):

	165°	170°	175°	180°
0°	797.2	797.2	797.2	797.2
2.5°	750.2	752.5	750.5	753.2
5°	700.1	697.0	699.1	697.7
7.5°	653.7	651.0	647.0	645.6
10°	610.8	607.0	606.7	604.3
12.5°	579.3	575.9	571.2	570.5
15°	549.8	547.1	544.8	546.8
17.5°	524.8	522.4	521.8	519.7
20°	501.5	499.8	500.4	496.0
22.5°	482.9	479.1	478.5	478.5
25°	463.2	461.5	459.8	461.5
27.5°	446.0	444.3	443.6	443.9
30°	430.4	427.0	427.4	427.0
32.5°	413.5	411.5	410.8	410.1
35°	396.9	396.9	395.2	395.2
37.5°	381.7	381.3	380.3	381.0
40°	364.1	363.7	362.7	360.7
42.5°	347.2	345.8	345.5	345.1
45°	329.2	329.2	328.6	328.2
47.5°	311.6	312.3	313.7	313.3
50°	296.1	296.4	297.4	297.8
52.5°	278.8	281.2	282.5	282.2
55°	262.9	265.3	267.7	268.0
57.5°	247.0	250.1	252.4	253.1
60°	230.8	235.2	238.2	239.6
62.5°	215.2	220.3	223.3	223.3
65°	197.9	203.0	205.7	207.8
67.5°	180.0	185.1	187.8	189.5
70°	160.0	165.1	169.2	170.5
72.5°	140.4	144.8	147.9	149.6
75°	117.1	123.2	126.2	127.9
77.5°	94.7	100.8	102.5	103.5
80°	72.4	75.8	78.2	78.5
82.5°	51.4	54.1	54.5	55.5
85°	30.5	31.8	32.1	31.8
87.5°	12.5	12.2	12.2	12.9
90°	0.0	0.0	0.0	0.0



TEST NUMBER: P242806

CATALOG NUMBER: S125DRP-S610D830-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	16.68	18.25	17.05	18.56	18.88	16.66	18.22	17.02	18.54	18.85
	3H	18.05	19.46	18.43	19.79	20.15	18.08	19.49	18.46	19.82	20.18
	4H	18.55	19.87	18.94	20.22	20.60	18.57	19.90	18.97	20.24	20.62
	6H	18.88	20.11	19.29	20.47	20.87	18.89	20.11	19.30	20.48	20.87
	8H	18.97	20.14	19.40	20.53	20.93	18.97	20.14	19.39	20.52	20.92
	12H	19.02	20.14	19.45	20.52	20.95	19.01	20.13	19.44	20.51	20.94
4H	2H	18.19	19.51	18.59	19.86	20.24	17.73	19.06	18.13	19.41	19.78
	3H	19.53	20.64	19.94	21.04	21.44	19.40	20.50	19.81	20.90	21.30
	4H	20.04	21.04	20.47	21.45	21.89	19.95	20.94	20.38	21.36	21.80
	6H	20.41	21.28	20.87	21.72	22.18	20.33	21.19	20.78	21.63	22.09
	8H	20.52	21.33	20.98	21.77	22.24	20.42	21.23	20.88	21.67	22.14
	12H	20.58	21.31	21.06	21.78	22.25	20.48	21.20	20.96	21.68	22.15
8H	4H	20.53	21.34	20.99	21.78	22.25	20.29	21.10	20.75	21.55	22.01
	6H	20.98	21.65	21.47	22.14	22.61	20.79	21.47	21.29	21.95	22.43
	8H	21.12	21.72	21.63	22.23	22.72	20.94	21.54	21.45	22.05	22.54
	12H	21.22	21.76	21.73	22.25	22.81	21.04	21.57	21.55	22.06	22.63
12H	4H	20.57	21.30	21.05	21.77	22.25	20.31	21.04	20.79	21.51	21.98
	6H	21.06	21.66	21.57	22.17	22.66	20.84	21.44	21.35	21.95	22.44
	8H	21.25	21.78	21.76	22.27	22.84	21.05	21.58	21.56	22.07	22.63