

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: P242811

Luminaire Tested: S125DRP-S610D835-X4F0-XX-UDD-A-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P242811
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-S610D835-X4F0-XX-UDD-A-W
Description: DEFINE 5 DIRECT RECESSED WITH ASYMMETRIC FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

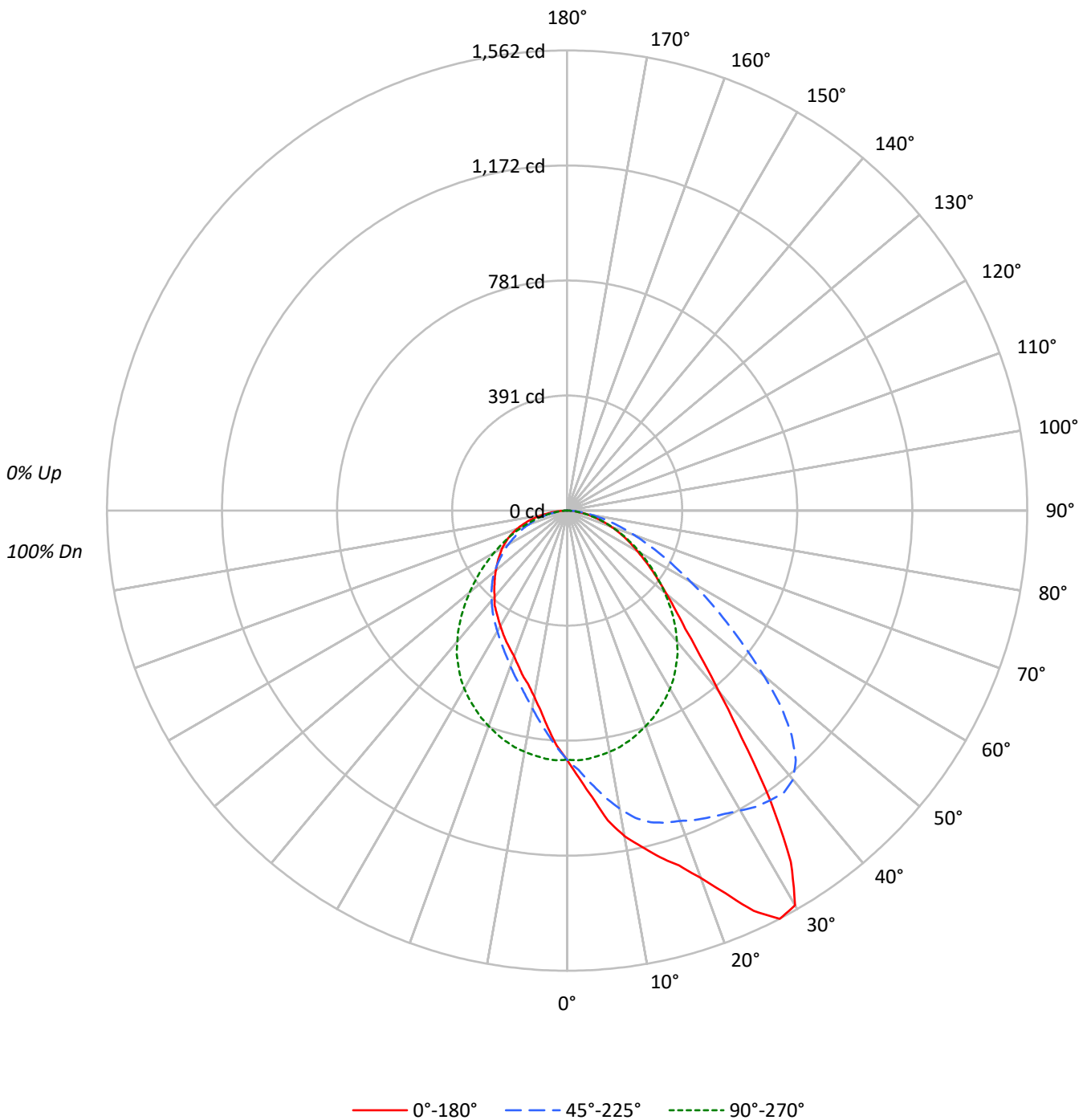
Lumens per Lamp: N/A
Luminaire Lumens: 2386.8 lumens
Efficiency: N/A
Efficacy: 127.0 lumens/watt
Spacing Criteria (0/90/45): 1.43 / 1.23 / 1.53
Luminous Opening: Rectangular (W 3.88' x L: 0.39' x H: 0')
CIE Type: Direct

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°	6011	6011	6011	6011	6011
5°	6962	6631	6032	5425	5282
10°	8099	7415	6000	4915	4628
15°	8965	8059	5956	4517	4268
20°	10035	8477	5887	4254	3981
25°	11757	9006	5808	4034	3840
30°	12698	9646	5730	3886	3719
35°	10441	10419	5585	3785	3638
40°	7421	11065	5382	3700	3551
45°	5701	10828	5109	3627	3500
50°	4866	9634	4771	3537	3493
55°	4333	8181	4440	3408	3523
60°	3909	6910	4077	3286	3613
65°	3611	5886	3713	3121	3707
70°	3283	5006	3335	2909	3759
75°	2897	4278	2938	2680	3726
80°	2439	3512	2394	2276	3409
85°	1933	2544	1729	1876	2748

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 10828 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	81.4	3.4
10°-20°	242.5	10.2
20°-30°	393.9	16.5
30°-40°	481.3	20.2
40°-50°	436.7	18.3
50°-60°	347.8	14.6
60°-70°	242.2	10.1
70°-80°	129.0	5.4
80°-90°	32.0	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°	717.7	30.1
0°-40°	1199.1	50.2
0°-60°	1983.5	83.1
0°-90°	2386.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2386.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	846	846	846	846	846	
5°	976	929	845	760	740	98
15°	1218	1095	810	614	580	348
25°	1499	1148	741	514	490	687
35°	1203	1201	644	436	419	738
45°	567	1077	508	361	348	451
55°	350	660	358	275	284	314
65°	215	350	221	186	220	213
75°	106	156	107	98	136	114
85°	24	31	21	23	34	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°	845.8	845.8	845.8	845.8	845.8	845.8	845.8	845.8	845.8	845.8	845.8
2.5°	906.8	905.4	904.0	901.1	903.2	897.1	894.3	889.2	883.1	881.0	878.5
5°	975.8	977.5	979.3	971.8	972.5	967.5	956.0	946.7	939.1	929.4	922.6
7.5°	1061.2	1055.8	1056.2	1051.5	1043.2	1036.4	1025.3	1009.9	995.9	980.1	966.4
10°	1122.2	1122.6	1119.4	1113.6	1104.6	1098.2	1082.4	1067.3	1049.0	1027.4	1012.0
12.5°	1168.2	1170.0	1165.7	1157.4	1154.2	1137.7	1126.2	1107.5	1084.9	1068.7	1043.2
15°	1218.4	1214.5	1211.6	1201.9	1194.4	1179.3	1159.6	1140.9	1117.2	1095.3	1073.4
17.5°	1262.9	1266.2	1261.5	1254.3	1232.1	1214.5	1190.1	1166.4	1138.0	1110.7	1085.2
20°	1326.8	1329.7	1321.5	1306.0	1278.0	1260.4	1225.6	1192.6	1158.5	1120.8	1092.1
22.5°	1406.5	1403.0	1391.1	1365.6	1342.3	1306.0	1267.6	1225.6	1180.7	1136.9	1096.4
25°	1499.2	1484.1	1477.3	1448.2	1416.2	1368.5	1316.8	1257.9	1204.8	1148.4	1099.6
27.5°	1562.4	1556.2	1546.6	1522.9	1486.2	1432.0	1371.0	1300.6	1229.2	1160.3	1098.9
30°	1547.3	1548.0	1548.7	1542.2	1520.7	1482.3	1421.6	1344.4	1255.4	1175.4	1101.4
32.5°	1413.7	1429.9	1445.3	1465.4	1478.3	1478.7	1446.4	1378.5	1286.3	1192.6	1100.0
35°	1203.4	1207.3	1247.9	1288.1	1342.6	1385.0	1413.4	1382.5	1305.3	1200.8	1098.9
37.5°	972.9	992.6	1023.1	1068.4	1150.2	1217.0	1304.6	1334.7	1298.5	1207.7	1098.5
40°	799.8	817.8	836.1	882.4	948.8	1034.3	1137.3	1225.3	1245.7	1192.6	1087.8
42.5°	666.3	679.6	700.4	732.4	785.1	858.4	955.6	1077.3	1160.6	1148.8	1065.1
45°	567.2	576.2	592.0	619.6	659.8	719.1	805.9	931.6	1041.1	1077.3	1026.7
47.5°	496.9	497.2	510.1	529.9	560.4	615.0	679.9	783.3	901.4	985.1	973.2
50°	440.1	438.3	448.0	464.5	487.5	520.9	582.3	660.9	773.3	871.3	898.6
52.5°	391.3	392.0	397.0	408.2	426.5	453.8	495.8	564.7	656.6	757.8	815.3
55°	349.7	348.2	355.0	363.3	377.3	396.0	429.0	483.2	561.1	660.2	727.0
57.5°	309.5	313.4	316.3	322.0	334.2	347.1	376.6	418.2	482.5	570.4	641.2
60°	275.0	278.9	281.1	286.8	296.2	306.9	328.5	360.8	412.8	486.1	556.1
62.5°	244.1	247.0	247.3	252.4	259.6	270.0	285.8	311.6	350.0	411.8	480.0
65°	214.7	214.7	216.1	221.5	225.1	234.4	247.3	267.1	300.1	350.0	408.5
67.5°	186.0	187.8	187.4	189.9	193.1	201.0	210.7	227.2	253.5	291.1	339.6
70°	158.0	159.4	159.0	160.8	164.4	169.1	176.6	192.1	209.7	240.9	281.1
72.5°	132.8	133.2	132.1	134.6	136.4	140.4	149.0	155.4	171.6	196.7	228.0
75°	105.5	106.3	107.0	108.4	110.6	112.7	117.0	125.3	136.1	155.8	177.0
77.5°	84.0	82.2	84.4	84.0	85.1	86.9	90.8	95.5	104.8	118.1	135.7
80°	59.6	60.0	60.0	60.3	62.1	63.2	66.4	69.6	76.5	85.8	97.3
82.5°	39.5	40.6	39.8	40.6	42.0	42.7	44.2	46.7	49.9	56.7	64.3
85°	23.7	21.9	22.6	23.3	23.3	23.7	25.1	26.2	28.4	31.2	34.5
87.5°	8.6	9.3	9.7	9.7	10.1	10.1	11.5	11.5	12.6	13.6	15.1
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):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	845.8	845.8	845.8	845.8	845.8	845.8	845.8	845.8	845.8	845.8	845.8
2.5°	876.3	873.8	870.9	865.9	859.8	856.6	851.5	848.3	841.8	836.5	830.7
5°	914.4	905.0	896.4	885.3	873.1	865.2	855.8	845.4	834.7	823.5	811.3
7.5°	952.4	937.0	920.1	902.5	885.3	869.1	854.1	838.6	824.6	807.0	792.3
10°	990.8	970.0	947.7	921.5	896.1	873.8	851.2	831.4	811.3	789.8	770.8
12.5°	1029.2	999.8	966.1	936.6	904.7	876.7	849.0	822.5	795.9	771.5	748.5
15°	1043.2	1018.8	989.8	948.8	914.4	877.4	842.2	809.5	779.0	752.5	724.5
17.5°	1056.9	1025.7	994.8	955.3	910.4	870.6	830.7	795.2	761.4	728.0	702.6
20°	1060.1	1027.8	995.1	956.7	910.4	863.0	823.2	778.3	741.3	706.5	673.5
22.5°	1059.0	1021.3	985.1	945.2	900.4	857.6	807.4	761.4	720.5	686.4	651.6
25°	1051.1	1012.0	967.5	927.6	883.1	836.8	788.0	740.6	699.7	660.6	626.4
27.5°	1046.5	996.9	948.1	902.2	859.4	816.7	769.3	720.5	675.6	635.8	604.2
30°	1036.1	980.4	923.7	875.2	831.1	789.8	745.6	698.2	650.9	612.1	577.6
32.5°	1026.7	959.6	898.9	845.1	797.7	757.8	718.0	673.5	627.2	587.7	553.2
35°	1014.2	939.1	870.6	811.0	761.1	719.8	685.7	643.7	601.0	562.9	529.9
37.5°	999.4	912.6	840.1	777.9	723.7	680.7	648.3	615.7	573.0	535.6	506.2
40°	981.5	883.8	805.9	742.0	685.3	640.1	610.7	580.1	546.0	511.9	480.3
42.5°	958.9	858.0	771.5	701.5	645.5	601.7	570.4	545.7	516.6	485.4	456.6
45°	930.2	825.7	733.8	659.8	603.1	559.7	527.7	508.3	485.7	455.6	430.8
47.5°	892.1	789.1	694.3	617.8	559.3	519.1	488.6	469.6	453.1	429.4	406.0
50°	837.9	747.1	650.9	575.1	516.6	476.0	448.4	431.5	417.9	400.6	381.6
52.5°	777.2	694.3	608.1	533.5	475.7	435.8	408.9	394.5	383.8	372.6	354.0
55°	712.2	640.4	558.6	487.5	434.0	394.9	371.2	358.3	348.9	339.6	328.1
57.5°	642.2	584.1	509.1	442.6	393.1	356.5	334.2	320.9	313.4	308.4	301.2
60°	567.6	519.5	457.0	397.8	349.7	318.1	296.5	286.8	280.7	276.8	271.8
62.5°	498.3	461.0	404.2	351.5	310.9	281.5	262.8	253.5	247.7	246.3	242.3
65°	430.4	399.9	352.2	307.3	271.4	245.9	229.8	220.8	217.2	215.0	215.4
67.5°	362.2	342.5	302.6	263.1	233.7	211.1	197.8	191.0	189.2	186.0	186.0
70°	300.8	286.8	254.5	221.1	195.7	179.1	167.7	160.5	158.7	157.2	156.9
72.5°	246.6	234.8	207.9	182.7	160.5	146.5	137.5	133.9	130.7	130.0	130.0
75°	193.5	186.7	164.4	143.2	127.4	117.4	110.9	107.0	104.8	104.5	104.8
77.5°	146.1	139.6	124.2	108.4	98.0	90.1	84.0	82.9	80.1	80.4	79.7
80°	103.4	99.4	90.5	78.6	70.4	63.9	61.0	58.5	57.8	56.7	57.8
82.5°	67.9	63.5	58.2	51.7	45.2	42.0	39.1	38.8	38.4	38.1	38.1
85°	37.0	37.3	33.7	28.0	25.1	23.0	21.2	21.2	20.8	20.5	20.8
87.5°	15.8	15.1	13.6	12.6	10.8	9.7	9.3	9.7	8.6	8.3	8.6
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°	845.8	845.8	845.8	845.8	845.8	845.8	845.8	845.8	845.8	845.8	845.8
2.5°	827.5	823.5	820.3	813.1	809.2	803.8	799.5	804.2	799.1	801.3	798.0
5°	805.2	795.2	788.0	777.6	768.6	760.4	754.3	753.2	750.3	748.9	744.6
7.5°	778.7	767.2	755.3	742.4	731.6	720.1	713.3	706.9	702.9	697.9	693.9
10°	755.7	738.8	724.5	707.9	693.6	681.0	671.0	665.9	661.3	654.5	651.9
12.5°	727.3	709.7	691.4	673.5	659.8	645.5	637.2	629.0	626.1	618.2	617.8
15°	705.8	679.6	662.3	644.4	625.4	613.9	606.7	598.4	594.9	589.5	585.5
17.5°	679.2	655.5	634.0	615.7	598.4	589.1	579.8	574.0	567.9	564.0	557.5
20°	649.8	627.5	606.0	586.2	573.7	562.5	555.4	550.0	543.5	541.7	535.3
22.5°	625.0	599.9	579.4	563.6	549.6	536.7	528.8	525.6	521.6	515.2	515.2
25°	597.7	572.2	554.6	538.1	525.9	514.4	509.1	504.4	500.1	496.1	494.7
27.5°	574.8	552.1	530.6	515.5	505.1	494.3	489.7	483.6	480.3	477.1	472.8
30°	550.3	527.0	508.7	494.3	482.8	473.5	468.5	464.5	461.7	458.8	456.6
32.5°	525.2	504.0	486.4	472.4	461.0	454.5	450.2	447.7	444.4	440.8	438.0
35°	503.7	480.0	462.7	450.5	441.6	436.2	431.2	428.6	425.1	425.1	422.2
37.5°	478.2	457.4	441.9	430.8	422.9	417.9	412.1	410.7	408.2	406.7	405.7
40°	455.9	436.9	422.5	411.4	402.8	398.8	394.5	391.7	390.2	388.4	387.7
42.5°	432.9	415.0	401.4	391.3	384.1	380.9	376.9	375.2	371.9	369.4	369.0
45°	409.6	392.0	379.5	371.2	364.7	360.8	358.3	354.0	352.5	349.7	349.3
47.5°	388.1	370.8	358.3	351.5	345.7	342.8	338.9	334.2	332.4	330.6	330.3
50°	363.3	347.9	336.4	329.9	324.5	319.9	315.9	313.0	312.0	312.0	312.7
52.5°	338.2	325.6	316.3	308.0	303.0	298.0	294.4	292.9	291.1	293.3	294.7
55°	313.8	300.5	293.3	285.8	280.7	275.0	273.2	272.5	271.4	274.3	275.7
57.5°	287.6	278.6	270.0	262.1	257.8	254.2	251.3	250.9	253.1	253.8	258.1
60°	262.8	252.0	244.5	238.7	233.3	231.2	230.5	229.8	231.2	235.1	241.2
62.5°	235.5	227.2	219.0	215.0	211.4	207.5	207.5	208.2	211.4	216.1	222.2
65°	208.9	201.4	196.0	191.0	187.8	185.6	186.3	187.8	191.0	197.1	203.9
67.5°	181.7	176.6	171.6	166.9	163.7	164.1	164.4	166.2	170.2	177.3	183.8
70°	155.4	149.7	145.8	144.0	141.4	140.0	142.2	145.8	149.0	155.4	160.8
72.5°	129.2	124.6	121.7	120.6	119.9	118.8	119.2	123.1	127.8	134.3	140.7
75°	103.4	101.6	99.4	98.0	96.9	97.6	98.4	102.0	105.5	112.4	119.5
77.5°	80.1	77.9	76.5	76.1	75.4	75.7	77.5	80.4	84.0	89.0	94.8
80°	57.1	56.4	55.6	55.3	55.3	55.6	58.5	60.3	63.5	68.2	72.5
82.5°	37.7	37.3	37.3	37.3	37.7	37.7	39.1	41.6	44.2	47.4	51.0
85°	21.9	21.2	22.3	22.6	21.9	23.0	23.7	25.1	26.2	28.0	29.8
87.5°	9.0	9.7	9.3	9.7	9.7	10.4	10.1	11.5	12.2	12.9	12.6
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: P242811

CATALOG NUMBER: S125DRP-S610D835-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	845.8	845.8	845.8	845.8
2.5°	795.9	798.4	796.3	799.1
5°	742.8	739.5	741.7	740.3
7.5°	693.6	690.7	686.4	685.0
10°	648.0	644.0	643.7	641.2
12.5°	614.6	611.0	606.0	605.3
15°	583.4	580.5	578.0	580.1
17.5°	556.8	554.3	553.6	551.4
20°	532.0	530.2	531.0	526.3
22.5°	512.3	508.3	507.6	507.6
25°	491.5	489.7	487.9	489.7
27.5°	473.2	471.4	470.6	471.0
30°	456.6	453.1	453.4	453.1
32.5°	438.7	436.5	435.8	435.1
35°	421.1	421.1	419.3	419.3
37.5°	404.9	404.6	403.5	404.2
40°	386.3	385.9	384.8	382.7
42.5°	368.3	366.9	366.5	366.2
45°	349.3	349.3	348.6	348.2
47.5°	330.6	331.4	332.8	332.4
50°	314.1	314.5	315.6	315.9
52.5°	295.8	298.3	299.8	299.4
55°	278.9	281.5	284.0	284.3
57.5°	262.1	265.3	267.8	268.5
60°	244.8	249.5	252.7	254.2
62.5°	228.3	233.7	236.9	236.9
65°	210.0	215.4	218.3	220.4
67.5°	191.0	196.4	199.2	201.0
70°	169.8	175.2	179.5	180.9
72.5°	149.0	153.7	156.9	158.7
75°	124.2	130.7	133.9	135.7
77.5°	100.5	107.0	108.8	109.9
80°	76.8	80.4	82.9	83.3
82.5°	54.6	57.4	57.8	58.9
85°	32.3	33.7	34.1	33.7
87.5°	13.3	12.9	12.9	13.6
90°	0.0	0.0	0.0	0.0

TEST NUMBER: P242811
 CATALOG NUMBER: S125DRP-S610D835-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	16.89	18.45	17.25	18.77	19.08	16.86	18.43	17.23	18.74	19.06
	3H	18.26	19.67	18.64	20.00	20.36	18.29	19.70	18.67	20.03	20.39
	4H	18.75	20.08	19.15	20.42	20.80	18.78	20.10	19.18	20.45	20.83
	6H	19.09	20.31	19.50	20.68	21.07	19.09	20.32	19.50	20.68	21.07
	8H	19.18	20.35	19.60	20.74	21.14	19.17	20.34	19.60	20.73	21.13
	12H	19.23	20.35	19.66	20.73	21.16	19.21	20.33	19.64	20.71	21.14
4H	2H	18.39	19.72	18.79	20.07	20.44	17.94	19.26	18.34	19.61	19.99
	3H	19.74	20.84	20.15	21.24	21.64	19.60	20.70	20.01	21.10	21.50
	4H	20.25	21.24	20.68	21.66	22.09	20.16	21.15	20.59	21.57	22.00
	6H	20.62	21.49	21.08	21.93	22.39	20.53	21.40	20.99	21.84	22.30
	8H	20.72	21.53	21.18	21.98	22.44	20.63	21.44	21.09	21.88	22.35
	12H	20.79	21.51	21.27	21.99	22.46	20.68	21.41	21.16	21.88	22.35
8H	4H	20.73	21.54	21.19	21.98	22.45	20.50	21.31	20.96	21.75	22.22
	6H	21.18	21.85	21.68	22.34	22.82	21.00	21.67	21.49	22.16	22.64
	8H	21.33	21.93	21.84	22.44	22.92	21.15	21.75	21.66	22.26	22.74
	12H	21.43	21.96	21.94	22.45	23.02	21.24	21.78	21.75	22.27	22.83
12H	4H	20.78	21.50	21.26	21.98	22.45	20.52	21.24	21.00	21.72	22.19
	6H	21.26	21.87	21.78	22.38	22.86	21.05	21.65	21.56	22.16	22.64
	8H	21.46	21.99	21.96	22.48	23.04	21.25	21.78	21.76	22.28	22.84