

Scaled data based on original data using  
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P832014

Luminaire Tested: S123RDIP-S1165D805U840-4F0-1E-UDD-G

Issue Date: 05/03/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P832014  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2301-905-2, G3-1807-864-5)  
Test Lab: INNOVATION CENTER  
Issue Date: 05/03/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123RDIP-S1165D805U840-4F0-1E-UDD-G  
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 1165 LUMENS PER FOOT, GRAZE OPTIC  
UPLIGHT 805 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: -

**Summary**

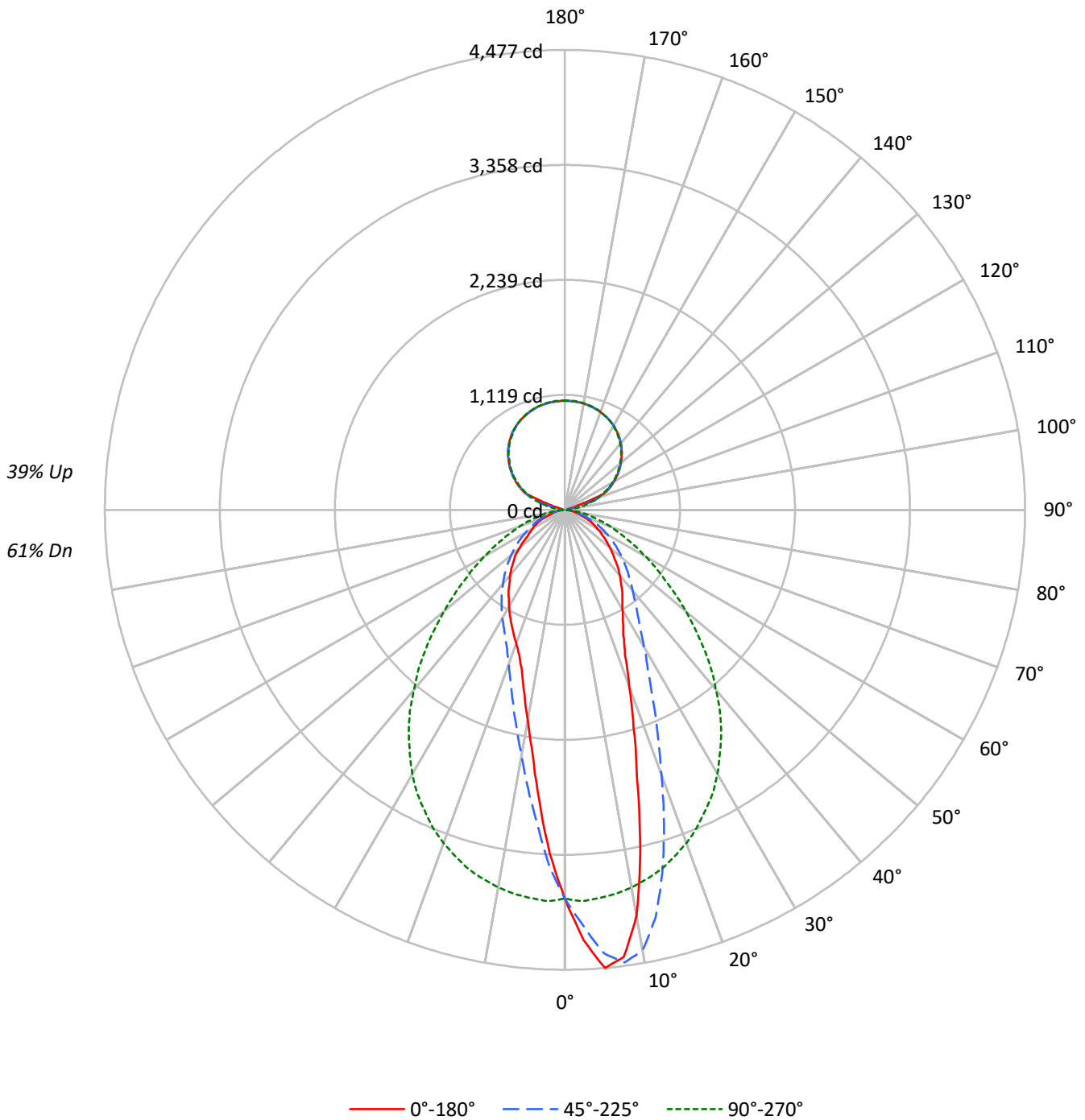
Lumens per Lamp: N/A  
Luminaire Lumens: 8259.7 lumens  
Efficiency: N/A  
Efficacy: 131.5 lumens/watt  
Spacing Criteria (0/90/45): 0.55 / 1.17 / 0.8  
Luminous Opening: Rectangular (W 4' x L: 0.25' x H: 0')  
CIE Type: Semi-Direct

Input Watts (W): 62.8  
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

TEST NUMBER: P832014

CATALOG NUMBER: S123RDIP-S1165D805U840-4F0-1E-UDD-G

### 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	110	110	110	110	103	103	103	103	89	89	89	77	77	77	66	66	66	66	66	66	61	
1	101	97	94	90	95	91	88	85	80	78	75	69	68	66	60	59	58	58	58	58	53	
2	93	86	80	75	87	81	76	72	71	67	64	62	59	57	54	52	50	50	50	50	46	
3	86	77	70	64	80	72	66	61	64	59	55	56	52	50	49	46	44	44	44	44	40	
4	79	69	61	56	74	65	58	53	58	52	48	51	47	44	44	41	39	39	39	39	36	
5	73	62	54	49	68	59	52	47	52	47	43	46	42	39	41	37	35	35	35	35	32	
6	68	56	48	43	63	53	46	41	48	42	38	42	38	35	37	34	31	31	31	31	29	
7	63	51	44	38	59	49	42	37	44	38	34	39	35	31	35	31	28	28	28	28	26	
8	59	47	40	35	55	45	38	33	40	35	31	36	32	28	32	29	26	26	26	26	24	
9	55	43	36	31	52	41	35	30	37	32	28	34	29	26	30	27	24	24	24	24	22	
10	52	40	33	29	49	38	32	28	35	29	26	31	27	24	28	25	22	22	22	22	20	

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°	135°	180°
0°	40739	40739	40739	40739	40739
5°	48372	46830	40995	33140	30767
10°	43827	47566	40791	26552	22778
15°	30175	40783	40360	21702	18018
20°	20992	31400	39550	18299	15837
25°	15997	23931	38371	16264	14596
30°	13926	19132	36896	15101	13520
35°	12786	16139	34807	14121	12540
40°	11665	14412	32073	13159	11643
45°	10535	13181	29125	12248	10749
50°	9562	12161	25648	11355	9640
55°	8649	11168	22308	10483	8270
60°	7750	10155	19375	9522	7817
65°	7154	9011	16677	8558	7391
70°	5813	7789	14552	7742	6008
75°	5099	6197	12327	6421	5290
80°	4618	5244	10098	5387	5002
85°	4211	4594	7669	4891	4594

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 80°  
 Vertical Angle: 45°  
 Luminance: 30731 cd/sqm



TEST NUMBER: P832014

CATALOG NUMBER: S123RDIP-S1165D805U840-4F0-1E-UDD-G

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	345.0	4.2
10°-20°	798.3	9.7
20°-30°	915.9	11.1
30°-40°	902.8	10.9
40°-50°	796.1	9.6
50°-60°	612.5	7.4
60°-70°	402.7	4.9
70°-80°	195.6	2.4
80°-90°	51.4	0.6
90°-100°	37.5	0.5
100°-110°	181.1	2.2
110°-120°	444.0	5.4
120°-130°	563.6	6.8
130°-140°	602.1	7.3
140°-150°	563.0	6.8
150°-160°	454.1	5.5
160°-170°	293.1	3.5
170°-180°	101.0	1.2
0°-30°	2059.1	24.9
0°-40°	2961.9	35.9
0°-60°	4370.5	52.9
0°-90°	5020.1	60.8
90°-120°	662.5	8.0
90°-150°	2391.3	29.0
90°-180°	3240.0	39.2
0°-180°	8259.7	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	3785	3785	3785	3785	3785	
5°	4477	4334	3794	3067	2848	409
15°	2708	3660	3622	1948	1617	764
25°	1347	2015	3231	1369	1229	636
35°	973	1228	2649	1075	954	607
45°	692	866	1913	805	706	537
55°	461	595	1189	559	441	413
65°	281	354	655	336	290	275
75°	123	149	296	154	127	132
85°	34	37	62	40	37	36
90°	24	19	1	19	24	12
95°	30	24	48	24	30	25
105°	35	173	235	173	35	72
115°	464	453	441	453	464	437
125°	635	632	622	632	635	567
135°	782	782	774	782	782	604
145°	902	901	894	901	902	564
155°	983	984	984	984	983	453
165°	1036	1035	1038	1035	1036	293
175°	1059	1060	1063	1060	1059	101
180°	1063	1063	1063	1063	1063	



TEST NUMBER: P832014

CATALOG NUMBER: S123RDIP-S1165D805U840-4F0-1E-UDD-G

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	3784.8	3784.8	3784.8	3784.8	3784.8	3784.8	3784.8	3784.8	3784.8	3784.8	3784.8
2.5°	4194.4	4181.2	4168.0	4164.2	4160.3	4147.9	4135.5	4107.5	4079.6	4050.9	4022.2
5°	4476.8	4478.4	4479.9	4476.1	4472.2	4455.9	4439.6	4405.5	4371.3	4334.1	4296.8
7.5°	4389.9	4414.8	4439.6	4444.3	4448.9	4461.3	4473.7	4466.0	4458.2	4444.3	4430.3
10°	4009.8	4008.2	4006.7	4034.6	4062.5	4145.5	4228.6	4271.2	4313.9	4351.9	4389.9
12.5°	3389.1	3391.4	3393.7	3485.3	3576.8	3655.2	3733.5	3842.2	3950.8	4067.9	4185.1
15°	2707.8	2745.8	2783.9	2865.3	2946.8	3064.7	3182.7	3328.5	3474.4	3659.8	3845.3
17.5°	2223.7	2240.0	2256.3	2334.6	2413.0	2524.7	2636.4	2801.7	2967.0	3205.9	3444.9
20°	1832.6	1847.4	1862.1	1918.8	1975.4	2082.5	2189.5	2347.0	2504.5	2741.2	2977.8
22.5°	1530.0	1558.7	1587.5	1625.5	1663.5	1741.1	1818.7	1979.3	2139.9	2355.6	2571.3
25°	1346.9	1360.1	1373.3	1405.9	1438.5	1513.0	1587.5	1693.8	1800.0	2015.0	2229.9
27.5°	1222.8	1226.7	1230.5	1254.6	1278.7	1326.8	1374.9	1473.4	1571.9	1748.8	1925.7
30°	1120.4	1127.4	1134.3	1153.0	1171.6	1206.5	1241.4	1311.2	1381.1	1539.3	1697.6
32.5°	1041.2	1045.1	1049.0	1064.5	1080.0	1105.6	1131.2	1186.3	1241.4	1362.4	1483.5
35°	973.0	973.7	974.5	986.1	997.8	1022.6	1047.4	1093.2	1139.0	1228.2	1317.4
37.5°	895.4	900.8	906.2	914.8	923.3	945.0	966.7	1004.0	1041.2	1114.9	1188.7
40°	830.2	834.8	839.5	849.6	859.7	876.7	893.8	928.0	962.1	1025.7	1089.3
42.5°	765.0	768.1	771.2	781.3	791.4	812.3	833.3	860.5	887.6	940.4	993.1
45°	692.1	699.8	707.6	718.5	729.3	747.2	765.0	793.0	820.9	865.9	910.9
47.5°	631.6	635.4	639.3	648.6	657.9	679.7	701.4	726.2	751.1	793.0	834.8
50°	571.0	572.6	574.2	582.7	591.2	610.6	630.0	658.7	687.4	726.2	765.0
52.5°	513.6	517.5	521.4	529.9	538.5	551.7	564.8	594.3	623.8	661.8	699.8
55°	460.9	463.2	465.5	471.7	477.9	493.5	509.0	534.6	560.2	595.1	630.0
57.5°	411.2	414.3	417.4	422.1	426.7	440.7	454.7	477.2	499.7	534.6	569.5
60°	360.0	363.9	367.8	373.2	378.6	389.5	400.4	420.5	440.7	471.7	502.8
62.5°	322.8	323.5	324.3	329.0	333.6	341.4	349.1	365.4	381.7	412.8	443.8
65°	280.9	283.2	285.5	287.9	290.2	296.4	302.6	316.6	330.5	353.8	377.1
67.5°	237.4	239.7	242.1	246.0	249.8	255.3	260.7	270.0	279.3	301.0	322.8
70°	184.7	184.7	184.7	190.9	197.1	206.4	215.7	222.7	229.7	247.5	265.4
72.5°	150.5	151.3	152.1	152.8	153.6	159.1	164.5	176.1	187.8	198.6	209.5
75°	122.6	123.4	124.1	124.9	125.7	127.2	128.8	132.7	136.6	149.0	161.4
77.5°	97.8	98.5	99.3	100.1	100.9	102.4	104.0	105.5	107.1	111.7	116.4
80°	74.5	75.3	76.0	76.8	77.6	78.4	79.1	80.7	82.2	84.6	86.9
82.5°	54.3	54.3	54.3	54.3	54.3	55.9	57.4	57.4	57.4	59.0	60.5
85°	34.1	34.1	34.1	34.9	35.7	35.7	35.7	36.5	37.2	37.2	37.2
87.5°	15.5	14.7	14.0	14.7	15.5	15.5	15.5	16.3	17.1	17.1	17.1
90°	23.7	23.3	23.0	22.6	22.3	21.8	21.1	20.4	19.6	18.9	16.7
92.5°	26.8	26.7	26.5	26.3	26.1	25.4	24.2	23.0	21.8	20.5	18.9
95°	30.0	30.0	30.0	30.0	30.0	29.4	28.2	26.9	25.7	24.5	22.5
97.5°	32.4	32.2	32.0	31.8	31.7	30.9	29.5	28.1	26.7	25.3	34.2
100°	33.2	33.0	32.8	32.6	32.5	31.7	30.3	28.9	27.5	26.1	53.4
102.5°	33.9	33.6	33.2	32.9	32.5	35.3	41.1	46.8	52.6	58.4	89.0
105°	34.7	34.4	34.0	33.7	33.3	48.7	79.7	110.8	141.8	172.9	188.7
107.5°	82.1	105.1	128.1	151.1	174.0	199.0	226.1	253.1	280.1	307.1	304.5
110°	217.1	242.2	267.3	292.4	317.5	332.9	338.7	344.5	350.3	356.1	354.1



TEST NUMBER: P832014

CATALOG NUMBER: S123RDIP-S1165D805U840-4F0-1E-UDD-G

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	411.3	411.7	412.0	412.4	412.7	412.1	410.5	409.0	407.4	405.8	403.9
115°	464.2	463.5	462.8	462.1	461.4	460.2	458.4	456.7	454.9	453.2	451.6
117.5°	506.9	506.7	506.5	506.3	506.2	505.4	504.0	502.6	501.2	499.8	498.9
120°	551.1	551.1	551.1	551.1	551.1	550.4	549.0	547.6	546.2	544.8	544.2
122.5°	594.5	594.3	594.1	594.0	593.8	593.3	592.4	591.5	590.6	589.8	589.1
125°	634.8	634.4	634.1	633.7	633.4	633.0	632.7	632.3	632.0	631.6	630.9
127.5°	674.2	674.6	674.9	675.3	675.6	675.6	675.0	674.5	674.0	673.4	672.6
130°	712.1	712.5	712.8	713.2	713.5	713.4	712.7	712.0	711.3	710.6	709.9
132.5°	746.9	747.4	747.9	748.5	749.0	748.9	748.2	747.5	746.8	746.1	745.6
135°	782.4	782.9	783.5	784.0	784.5	784.5	784.0	783.5	782.9	782.4	781.7
137.5°	816.4	816.7	817.1	817.4	817.8	817.5	816.6	815.7	814.9	814.0	813.6
140°	846.4	846.7	847.1	847.4	847.8	847.6	846.9	846.2	845.5	844.8	844.2
142.5°	874.0	874.5	875.0	875.6	876.1	876.1	875.6	875.0	874.5	874.0	873.5
145°	902.4	902.4	902.4	902.4	902.4	902.2	901.9	901.5	901.2	900.8	900.5
147.5°	922.9	923.8	924.7	925.6	926.4	926.7	926.4	926.0	925.7	925.3	925.0
150°	946.6	947.1	947.7	948.2	948.7	948.8	948.5	948.1	947.8	947.4	947.1
152.5°	965.6	966.4	967.3	968.2	969.1	969.2	968.5	967.8	967.1	966.4	966.2
155°	982.9	984.0	985.0	986.1	987.1	987.2	986.4	985.5	984.6	983.7	983.6
157.5°	997.9	999.3	1000.7	1002.1	1003.6	1003.7	1002.7	1001.6	1000.6	999.5	999.7
160°	1012.1	1013.4	1014.6	1015.8	1017.1	1017.1	1016.1	1015.0	1014.0	1012.9	1013.1
162.5°	1025.6	1026.6	1027.7	1028.7	1029.8	1029.7	1028.5	1027.2	1026.0	1024.8	1025.0
165°	1035.8	1037.1	1038.3	1039.5	1040.7	1040.7	1039.3	1037.9	1036.4	1035.0	1035.2
167.5°	1043.7	1045.1	1046.5	1047.9	1049.3	1049.3	1047.9	1046.5	1045.1	1043.7	1043.7
170°	1050.8	1052.2	1053.6	1055.0	1056.4	1056.4	1055.0	1053.6	1052.2	1050.8	1050.8
172.5°	1054.8	1056.4	1057.9	1059.5	1061.1	1061.2	1059.8	1058.4	1057.0	1055.6	1055.4
175°	1058.7	1060.1	1061.5	1062.9	1064.3	1064.4	1063.2	1062.0	1060.7	1059.5	1059.3
177.5°	1059.5	1061.3	1063.0	1064.8	1066.5	1066.7	1065.3	1063.9	1062.5	1061.1	1060.9
180°	1062.7	1062.7	1062.7	1062.7	1062.7	1062.7	1062.7	1062.7	1062.7	1062.7	1062.7



TEST NUMBER: P832014

CATALOG NUMBER: S123RDIP-S1165D805U840-4F0-1E-UDD-G

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	3784.8	3784.8	3784.8	3784.8	3784.8	3784.8	3784.8	3784.8	3784.8	3784.8	3784.8
2.5°	4018.3	4014.4	3977.2	3939.9	3903.5	3867.0	3839.8	3812.7	3766.9	3721.1	3692.4
5°	4267.4	4237.9	4178.9	4119.9	4031.5	3943.0	3868.5	3794.1	3699.4	3604.7	3525.6
7.5°	4406.2	4382.2	4310.8	4239.4	4122.3	4005.1	3888.7	3772.3	3632.7	3493.0	3373.5
10°	4410.1	4430.3	4371.3	4312.4	4180.5	4048.6	3890.3	3732.0	3544.2	3356.5	3202.1
12.5°	4272.0	4358.9	4346.5	4334.1	4199.8	4065.6	3873.2	3680.8	3450.3	3219.9	3026.7
15°	4013.6	4182.0	4231.7	4281.3	4170.4	4059.4	3840.6	3621.8	3351.0	3080.3	2858.3
17.5°	3680.8	3916.7	4047.8	4178.9	4098.2	4017.5	3777.8	3538.0	3233.1	2928.2	2686.9
20°	3286.6	3595.4	3801.0	4006.7	3977.2	3947.7	3700.2	3452.7	3123.7	2794.7	2533.3
22.5°	2897.1	3223.0	3507.0	3791.0	3821.2	3851.5	3601.6	3351.8	2991.8	2631.8	2365.7
25°	2561.2	2892.5	3230.8	3569.1	3637.3	3705.6	3468.2	3230.8	2857.6	2484.4	2219.8
27.5°	2240.7	2555.8	2928.2	3300.6	3424.7	3548.9	3331.6	3114.4	2725.7	2337.0	2073.2
30°	1979.3	2260.9	2641.1	3021.3	3194.3	3367.3	3167.9	2968.5	2582.9	2197.3	1938.9
32.5°	1735.6	1987.8	2369.5	2751.3	2952.2	3153.2	2980.9	2808.7	2437.8	2066.9	1811.7
35°	1543.2	1769.0	2125.1	2481.3	2706.3	2931.3	2790.1	2648.9	2286.5	1924.2	1682.9
37.5°	1378.0	1567.3	1901.7	2236.1	2475.1	2714.0	2596.1	2478.2	2137.6	1796.9	1568.8
40°	1241.4	1393.5	1704.6	2015.7	2250.1	2484.4	2383.5	2282.6	1977.7	1672.8	1459.4
42.5°	1124.3	1255.4	1534.7	1814.0	2028.9	2243.9	2177.1	2110.4	1834.2	1558.0	1360.1
45°	1021.1	1131.2	1377.2	1623.1	1821.0	2018.8	1966.1	1913.3	1675.1	1436.9	1255.4
47.5°	929.5	1024.2	1243.7	1463.3	1641.0	1818.7	1769.8	1720.9	1523.8	1326.8	1161.5
50°	845.7	926.4	1109.5	1292.6	1452.5	1612.3	1571.9	1531.6	1368.7	1205.7	1063.0
52.5°	766.6	833.3	997.8	1162.3	1291.1	1419.9	1388.8	1357.8	1232.1	1106.4	976.8
55°	691.3	752.6	891.5	1030.4	1140.5	1250.7	1219.7	1188.7	1090.9	993.1	879.1
57.5°	623.0	676.6	789.1	901.6	989.2	1076.9	1062.2	1047.4	966.0	884.5	790.6
60°	550.9	599.0	696.0	793.0	863.6	934.2	917.1	900.0	841.8	783.6	702.9
62.5°	486.5	529.2	606.7	684.3	741.7	799.2	786.7	774.3	730.1	685.9	619.2
65°	419.0	460.9	523.7	586.6	631.6	676.6	665.7	654.8	621.5	588.1	534.6
67.5°	357.7	392.6	446.9	501.2	531.5	561.7	555.5	549.3	523.7	498.1	456.2
70°	295.6	325.9	370.9	415.9	436.8	457.8	460.1	462.4	439.1	415.9	384.8
72.5°	233.5	257.6	299.5	341.4	357.7	374.0	373.2	372.4	358.5	344.5	316.6
75°	179.2	197.1	229.7	262.2	276.2	290.2	293.3	296.4	283.2	270.0	254.5
77.5°	128.8	141.2	166.0	190.9	206.4	221.9	223.5	225.0	218.8	212.6	197.8
80°	90.8	94.7	110.2	125.7	142.0	158.3	160.6	162.9	156.7	150.5	141.2
82.5°	62.8	65.2	70.6	76.0	89.2	102.4	105.5	108.6	105.5	102.4	92.3
85°	38.0	38.8	41.1	43.4	49.7	55.9	59.0	62.1	60.5	59.0	53.5
87.5°	17.1	17.1	17.8	18.6	20.2	21.7	25.6	29.5	27.2	24.8	22.5
90°	14.4	12.1	9.8	7.8	6.1	4.3	2.5	0.8	2.5	4.3	6.1
92.5°	17.4	15.8	14.2	13.9	15.0	16.1	17.1	18.2	17.1	16.1	15.0
95°	20.6	18.7	16.8	19.4	26.6	33.8	41.0	48.2	41.0	33.8	26.6
97.5°	43.2	52.1	61.1	68.0	72.9	77.8	82.7	87.6	82.7	77.8	72.9
100°	80.8	108.2	135.5	147.5	144.0	140.4	136.9	133.4	136.9	140.4	144.0
102.5°	119.5	150.0	180.5	194.7	192.4	190.1	187.8	185.5	187.8	190.1	192.4
105°	204.5	220.3	236.1	243.0	241.1	239.1	237.2	235.3	237.2	239.1	241.1
107.5°	301.9	299.2	296.6	294.5	292.9	291.3	289.7	288.2	289.7	291.3	292.9
110°	352.2	350.3	348.3	346.7	345.3	343.9	342.5	341.1	342.5	343.9	345.3





TEST NUMBER: P832014

CATALOG NUMBER: S123RDIP-S1165D805U840-4F0-1E-UDD-G

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	401.9	400.0	398.1	396.5	395.3	394.1	392.8	391.6	392.8	394.1	395.3
115°	450.0	448.4	446.9	445.5	444.5	443.4	442.4	441.3	442.4	443.4	444.5
117.5°	498.0	497.1	496.2	495.2	494.0	492.7	491.5	490.3	491.5	492.7	494.0
120°	543.7	543.2	542.7	541.6	540.0	538.4	536.9	535.3	536.9	538.4	540.0
122.5°	588.4	587.7	587.0	586.0	584.8	583.5	582.3	581.1	582.3	583.5	584.8
125°	630.2	629.5	628.8	627.7	626.3	624.9	623.5	622.1	623.5	624.9	626.3
127.5°	671.7	670.8	669.9	668.8	667.4	666.0	664.6	663.2	664.6	666.0	667.4
130°	709.2	708.5	707.7	706.7	705.3	703.9	702.5	701.1	702.5	703.9	705.3
132.5°	745.0	744.5	744.0	743.0	741.6	740.2	738.8	737.4	738.8	740.2	741.6
135°	781.0	780.3	779.6	778.7	777.7	776.6	775.6	774.5	775.6	776.6	777.7
137.5°	813.3	812.9	812.6	811.7	810.3	808.9	807.5	806.1	807.5	808.9	810.3
140°	843.7	843.2	842.7	841.9	840.8	839.8	838.7	837.7	838.7	839.8	840.8
142.5°	872.9	872.4	871.9	871.1	870.0	869.0	867.9	866.9	867.9	869.0	870.0
145°	900.1	899.8	899.4	898.6	897.4	896.2	895.0	893.7	895.0	896.2	897.4
147.5°	924.6	924.2	923.9	923.3	922.4	921.5	920.7	919.8	920.7	921.5	922.4
150°	946.7	946.4	946.0	945.6	945.0	944.5	944.0	943.5	944.0	944.5	945.0
152.5°	966.0	965.8	965.7	965.5	965.3	965.1	965.0	964.8	965.0	965.1	965.3
155°	983.4	983.2	983.0	983.1	983.5	983.8	984.2	984.5	984.2	983.8	983.5
157.5°	999.9	1000.0	1000.2	1000.3	1000.3	1000.3	1000.3	1000.3	1000.3	1000.3	1000.3
160°	1013.3	1013.5	1013.6	1013.8	1014.0	1014.2	1014.3	1014.5	1014.3	1014.2	1014.0
162.5°	1025.1	1025.3	1025.5	1025.8	1026.4	1026.9	1027.4	1027.9	1027.4	1026.9	1026.4
165°	1035.4	1035.6	1035.7	1036.1	1036.6	1037.1	1037.7	1038.2	1037.7	1037.1	1036.6
167.5°	1043.7	1043.7	1043.7	1044.1	1044.8	1045.5	1046.2	1046.9	1046.2	1045.5	1044.8
170°	1050.8	1050.8	1050.8	1051.2	1051.9	1052.6	1053.3	1054.0	1053.3	1052.6	1051.9
172.5°	1055.2	1055.0	1054.9	1055.2	1056.1	1057.0	1057.9	1058.7	1057.9	1057.0	1056.1
175°	1059.2	1059.0	1058.8	1059.2	1060.0	1060.9	1061.8	1062.7	1061.8	1060.9	1060.0
177.5°	1060.7	1060.6	1060.4	1060.7	1061.6	1062.5	1063.4	1064.3	1063.4	1062.5	1061.6
180°	1062.7	1062.7	1062.7	1062.7	1062.7	1062.7	1062.7	1062.7	1062.7	1062.7	1062.7



TEST NUMBER: P832014

CATALOG NUMBER: S123RDIP-S1165D805U840-4F0-1E-UDD-G

**CANDELA DISTRIBUTION (continued):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	3784.8	3784.8	3784.8	3784.8	3784.8	3784.8	3784.8	3784.8	3784.8	3784.8	3784.8
2.5°	3663.7	3619.5	3575.3	3543.5	3511.6	3472.1	3432.5	3431.0	3429.4	3399.9	3370.4
5°	3446.5	3369.7	3292.8	3217.6	3142.3	3067.1	2991.8	2974.7	2957.7	2932.1	2906.5
7.5°	3254.0	3131.5	3008.9	2912.7	2816.5	2741.2	2665.9	2614.7	2563.5	2523.9	2484.4
10°	3047.7	2895.6	2743.5	2627.1	2510.8	2429.3	2347.8	2288.9	2229.9	2202.0	2174.0
12.5°	2833.5	2668.3	2503.0	2388.9	2274.9	2177.1	2079.4	2025.8	1972.3	1933.5	1894.7
15°	2636.4	2458.8	2281.1	2160.1	2039.0	1947.5	1855.9	1802.4	1748.8	1710.0	1671.2
17.5°	2445.6	2266.4	2087.1	1964.5	1841.9	1758.9	1675.9	1623.9	1571.9	1547.9	1523.8
20°	2271.8	2091.0	1910.2	1794.6	1679.0	1597.5	1516.1	1488.1	1460.2	1437.7	1415.2
22.5°	2099.5	1925.7	1751.9	1641.0	1530.0	1471.1	1412.1	1389.6	1367.1	1350.0	1333.0
25°	1955.2	1782.2	1609.2	1512.2	1415.2	1369.4	1323.7	1308.9	1294.2	1277.1	1260.0
27.5°	1809.4	1644.9	1480.4	1402.8	1325.2	1288.0	1250.7	1232.1	1213.5	1199.5	1185.5
30°	1680.6	1528.5	1376.4	1312.0	1247.6	1215.0	1182.4	1162.3	1142.1	1128.9	1115.7
32.5°	1556.4	1421.4	1286.4	1231.3	1176.2	1144.4	1112.6	1093.2	1073.8	1058.3	1042.8
35°	1441.6	1324.4	1207.3	1156.8	1106.4	1074.6	1042.8	1023.4	1004.0	988.5	973.0
37.5°	1340.7	1234.4	1128.1	1080.8	1033.5	1005.5	977.6	957.4	937.3	921.0	904.7
40°	1246.1	1152.2	1058.3	1012.5	966.7	936.5	906.2	888.4	870.5	855.8	841.1
42.5°	1162.3	1076.1	990.0	945.0	900.0	871.3	842.6	821.7	800.7	792.2	783.6
45°	1073.8	997.8	921.7	878.3	834.8	804.6	774.3	756.5	738.6	730.9	723.1
47.5°	996.2	925.6	855.0	812.3	769.7	742.5	715.4	701.4	687.4	676.6	665.7
50°	920.2	851.9	783.6	742.5	701.4	678.1	654.8	637.8	620.7	612.9	605.2
52.5°	847.3	785.2	723.1	681.2	639.3	616.8	594.3	579.6	564.8	548.5	532.3
55°	765.0	710.7	656.4	619.2	581.9	558.6	535.4	518.3	501.2	484.2	467.1
57.5°	696.7	643.2	589.7	556.3	522.9	500.4	477.9	459.3	440.7	426.7	412.8
60°	622.3	575.7	529.2	496.6	464.0	442.3	420.5	402.7	384.8	377.9	370.9
62.5°	552.4	509.0	465.5	436.8	408.1	387.2	366.2	354.6	342.9	338.3	333.6
65°	481.0	443.8	406.6	380.2	353.8	336.0	318.1	312.7	307.2	303.4	299.5
67.5°	414.3	382.5	350.7	327.4	304.1	291.7	279.3	273.1	266.9	262.2	257.6
70°	353.8	325.9	297.9	277.8	257.6	246.0	234.3	228.9	223.5	214.9	206.4
72.5°	288.6	266.9	245.2	229.7	214.1	204.1	194.0	183.1	172.2	164.5	156.7
75°	239.0	217.2	195.5	180.8	166.0	154.4	142.8	138.9	135.0	132.7	130.3
77.5°	183.1	164.5	145.9	134.2	122.6	117.2	111.7	109.4	107.1	106.3	105.5
80°	131.9	116.4	100.9	94.7	88.5	86.9	85.3	83.8	82.2	81.5	80.7
82.5°	82.2	74.5	66.7	65.2	63.6	62.8	62.1	61.3	60.5	59.7	59.0
85°	48.1	45.0	41.9	41.1	40.3	39.6	38.8	38.8	38.8	38.8	38.8
87.5°	20.2	20.2	20.2	20.2	20.2	20.2	20.2	20.2	20.2	19.4	18.6
90°	7.8	9.8	12.1	14.4	16.7	18.9	19.6	20.4	21.1	21.8	22.3
92.5°	13.9	14.2	15.8	17.4	18.9	20.5	21.8	23.0	24.2	25.4	26.1
95°	19.4	16.8	18.7	20.6	22.5	24.5	25.7	26.9	28.2	29.4	30.0
97.5°	68.0	61.1	52.1	43.2	34.2	25.3	26.7	28.1	29.5	30.9	31.7
100°	147.5	135.5	108.2	80.8	53.4	26.1	27.5	28.9	30.3	31.7	32.5
102.5°	194.7	180.5	150.0	119.5	89.0	58.4	52.6	46.8	41.1	35.3	32.5
105°	243.0	236.1	220.3	204.5	188.7	172.9	141.8	110.8	79.7	48.7	33.3
107.5°	294.5	296.6	299.2	301.9	304.5	307.1	280.1	253.1	226.1	199.0	174.0
110°	346.7	348.3	350.3	352.2	354.1	356.1	350.3	344.5	338.7	332.9	317.5



TEST NUMBER: P832014

CATALOG NUMBER: S123RDIP-S1165D805U840-4F0-1E-UDD-G

**CANDELA DISTRIBUTION (continued):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	396.5	398.1	400.0	401.9	403.9	405.8	407.4	409.0	410.5	412.1	412.7
115°	445.5	446.9	448.4	450.0	451.6	453.2	454.9	456.7	458.4	460.2	461.4
117.5°	495.2	496.2	497.1	498.0	498.9	499.8	501.2	502.6	504.0	505.4	506.2
120°	541.6	542.7	543.2	543.7	544.2	544.8	546.2	547.6	549.0	550.4	551.1
122.5°	586.0	587.0	587.7	588.4	589.1	589.8	590.6	591.5	592.4	593.3	593.8
125°	627.7	628.8	629.5	630.2	630.9	631.6	632.0	632.3	632.7	633.0	633.4
127.5°	668.8	669.9	670.8	671.7	672.6	673.4	674.0	674.5	675.0	675.6	675.6
130°	706.7	707.7	708.5	709.2	709.9	710.6	711.3	712.0	712.7	713.4	713.5
132.5°	743.0	744.0	744.5	745.0	745.6	746.1	746.8	747.5	748.2	748.9	749.0
135°	778.7	779.6	780.3	781.0	781.7	782.4	782.9	783.5	784.0	784.5	784.5
137.5°	811.7	812.6	812.9	813.3	813.6	814.0	814.9	815.7	816.6	817.5	817.8
140°	841.9	842.7	843.2	843.7	844.2	844.8	845.5	846.2	846.9	847.6	847.8
142.5°	871.1	871.9	872.4	872.9	873.5	874.0	874.5	875.0	875.6	876.1	876.1
145°	898.6	899.4	899.8	900.1	900.5	900.8	901.2	901.5	901.9	902.2	902.4
147.5°	923.3	923.9	924.2	924.6	925.0	925.3	925.7	926.0	926.4	926.7	926.4
150°	945.6	946.0	946.4	946.7	947.1	947.4	947.8	948.1	948.5	948.8	948.7
152.5°	965.5	965.7	965.8	966.0	966.2	966.4	967.1	967.8	968.5	969.2	969.1
155°	983.1	983.0	983.2	983.4	983.6	983.7	984.6	985.5	986.4	987.2	987.1
157.5°	1000.3	1000.2	1000.0	999.9	999.7	999.5	1000.6	1001.6	1002.7	1003.7	1003.6
160°	1013.8	1013.6	1013.5	1013.3	1013.1	1012.9	1014.0	1015.0	1016.1	1017.1	1017.1
162.5°	1025.8	1025.5	1025.3	1025.1	1025.0	1024.8	1026.0	1027.2	1028.5	1029.7	1029.8
165°	1036.1	1035.7	1035.6	1035.4	1035.2	1035.0	1036.4	1037.9	1039.3	1040.7	1040.7
167.5°	1044.1	1043.7	1043.7	1043.7	1043.7	1043.7	1045.1	1046.5	1047.9	1049.3	1049.3
170°	1051.2	1050.8	1050.8	1050.8	1050.8	1050.8	1052.2	1053.6	1055.0	1056.4	1056.4
172.5°	1055.2	1054.9	1055.0	1055.2	1055.4	1055.6	1057.0	1058.4	1059.8	1061.2	1061.1
175°	1059.2	1058.8	1059.0	1059.2	1059.3	1059.5	1060.7	1062.0	1063.2	1064.4	1064.3
177.5°	1060.7	1060.4	1060.6	1060.7	1060.9	1061.1	1062.5	1063.9	1065.3	1066.7	1066.5
180°	1062.7	1062.7	1062.7	1062.7	1062.7	1062.7	1062.7	1062.7	1062.7	1062.7	1062.7



TEST NUMBER: P832014

CATALOG NUMBER: S123RDIP-S1165D805U840-4F0-1E-UDD-G

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
0°	3784.8	3784.8	3784.8	3784.8
2.5°	3362.7	3354.9	3351.8	3348.7
5°	2882.4	2858.3	2852.9	2847.5
7.5°	2474.3	2464.2	2430.8	2397.5
10°	2143.0	2112.0	2098.0	2084.0
12.5°	1866.0	1837.3	1832.6	1828.0
15°	1651.1	1630.9	1623.9	1616.9
17.5°	1509.9	1495.9	1487.4	1478.8
20°	1405.1	1395.0	1388.8	1382.6
22.5°	1325.2	1317.4	1312.8	1308.1
25°	1248.4	1236.8	1232.9	1229.0
27.5°	1175.5	1165.4	1161.5	1157.6
30°	1107.2	1098.6	1093.2	1087.8
32.5°	1032.7	1022.6	1019.5	1016.4
35°	966.7	960.5	957.4	954.3
37.5°	896.9	889.2	884.5	879.9
40°	837.2	833.3	831.0	828.6
42.5°	776.7	769.7	768.9	768.1
45°	716.1	709.2	707.6	706.1
47.5°	659.5	653.3	652.5	651.7
50°	596.7	588.1	581.9	575.7
52.5°	524.5	516.7	511.3	505.9
55°	458.5	450.0	445.4	440.7
57.5°	408.9	405.0	402.7	400.4
60°	368.5	366.2	364.7	363.1
62.5°	331.3	329.0	329.0	329.0
65°	297.2	294.8	292.5	290.2
67.5°	252.9	248.3	247.5	246.7
70°	199.4	192.4	191.6	190.9
72.5°	156.0	155.2	153.6	152.1
75°	128.8	127.2	127.2	127.2
77.5°	104.0	102.4	102.4	102.4
80°	79.9	79.1	79.9	80.7
82.5°	59.0	59.0	58.2	57.4
85°	38.0	37.2	37.2	37.2
87.5°	18.6	18.6	18.6	18.6
90°	22.6	23.0	23.3	23.7
92.5°	26.3	26.5	26.7	26.8
95°	30.0	30.0	30.0	30.0
97.5°	31.8	32.0	32.2	32.4
100°	32.6	32.8	33.0	33.2
102.5°	32.9	33.2	33.6	33.9
105°	33.7	34.0	34.4	34.7
107.5°	151.1	128.1	105.1	82.1
110°	292.4	267.3	242.2	217.1



TEST NUMBER: P832014

CATALOG NUMBER: S123RDIP-S1165D805U840-4F0-1E-UDD-G

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
112.5°	412.4	412.0	411.7	411.3
115°	462.1	462.8	463.5	464.2
117.5°	506.3	506.5	506.7	506.9
120°	551.1	551.1	551.1	551.1
122.5°	594.0	594.1	594.3	594.5
125°	633.7	634.1	634.4	634.8
127.5°	675.3	674.9	674.6	674.2
130°	713.2	712.8	712.5	712.1
132.5°	748.5	747.9	747.4	746.9
135°	784.0	783.5	782.9	782.4
137.5°	817.4	817.1	816.7	816.4
140°	847.4	847.1	846.7	846.4
142.5°	875.6	875.0	874.5	874.0
145°	902.4	902.4	902.4	902.4
147.5°	925.6	924.7	923.8	922.9
150°	948.2	947.7	947.1	946.6
152.5°	968.2	967.3	966.4	965.6
155°	986.1	985.0	984.0	982.9
157.5°	1002.1	1000.7	999.3	997.9
160°	1015.8	1014.6	1013.4	1012.1
162.5°	1028.7	1027.7	1026.6	1025.6
165°	1039.5	1038.3	1037.1	1035.8
167.5°	1047.9	1046.5	1045.1	1043.7
170°	1055.0	1053.6	1052.2	1050.8
172.5°	1059.5	1057.9	1056.4	1054.8
175°	1062.9	1061.5	1060.1	1058.7
177.5°	1064.8	1063.0	1061.3	1059.5
180°	1062.7	1062.7	1062.7	1062.7



TEST NUMBER: P832014

CATALOG NUMBER: S123RDIP-S1165D805U840-4F0-1E-UDD-G

**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	14.58	15.48	15.46	16.37	17.48	19.25	20.15	20.12	21.03	22.14
	3H	15.81	16.61	16.70	17.51	18.65	20.75	21.56	21.64	22.45	23.59
	4H	16.20	16.95	17.10	17.85	19.00	21.25	22.00	22.15	22.90	24.05
	6H	16.48	17.18	17.39	18.08	19.24	21.56	22.26	22.47	23.16	24.32
	8H	16.57	17.23	17.49	18.15	19.32	21.64	22.30	22.56	23.23	24.39
	12H	16.62	17.25	17.55	18.17	19.35	21.68	22.31	22.60	23.22	24.41
4H	2H	15.32	16.07	16.22	16.97	18.12	19.25	20.01	20.16	20.91	22.06
	3H	16.69	17.32	17.61	18.25	19.41	20.92	21.54	21.83	22.47	23.64
	4H	17.15	17.72	18.07	18.65	19.84	21.53	22.10	22.45	23.02	24.21
	6H	17.52	18.01	18.46	18.96	20.15	21.97	22.46	22.91	23.41	24.60
	8H	17.65	18.11	18.59	19.05	20.25	22.10	22.56	23.04	23.50	24.70
	12H	17.73	18.14	18.68	19.10	20.31	22.16	22.58	23.12	23.54	24.75
8H	4H	17.47	17.93	18.41	18.87	20.07	21.50	21.96	22.44	22.90	24.10
	6H	17.93	18.31	18.90	19.30	20.50	22.00	22.37	22.96	23.36	24.56
	8H	18.13	18.46	19.10	19.44	20.66	22.18	22.51	23.16	23.49	24.71
	12H	18.27	18.56	19.25	19.53	20.80	22.30	22.59	23.28	23.56	24.83
12H	4H	17.48	17.89	18.44	18.86	20.06	21.45	21.86	22.41	22.82	24.03
	6H	17.99	18.33	18.97	19.30	20.52	21.97	22.30	22.95	23.28	24.50
	8H	18.21	18.51	19.19	19.47	20.75	22.17	22.46	23.14	23.43	24.70