

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: P832025

Luminaire Tested: S123RDIP-S1165D805U930-4F0-1E-UDD-G4

Issue Date: 05/03/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P832025  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2301-905-2, G3-1807-864-17)  
Test Lab: INNOVATION CENTER  
Issue Date: 05/03/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123RDIP-S1165D805U930-4F0-1E-UDD-G4  
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 1165 LUMENS PER FOOT, GRAZE OPTIC  
UPLIGHT 805 LUMENS PER FOOT, BATWING OPTIC  
Light Source: -  
Ballast/Driver: -

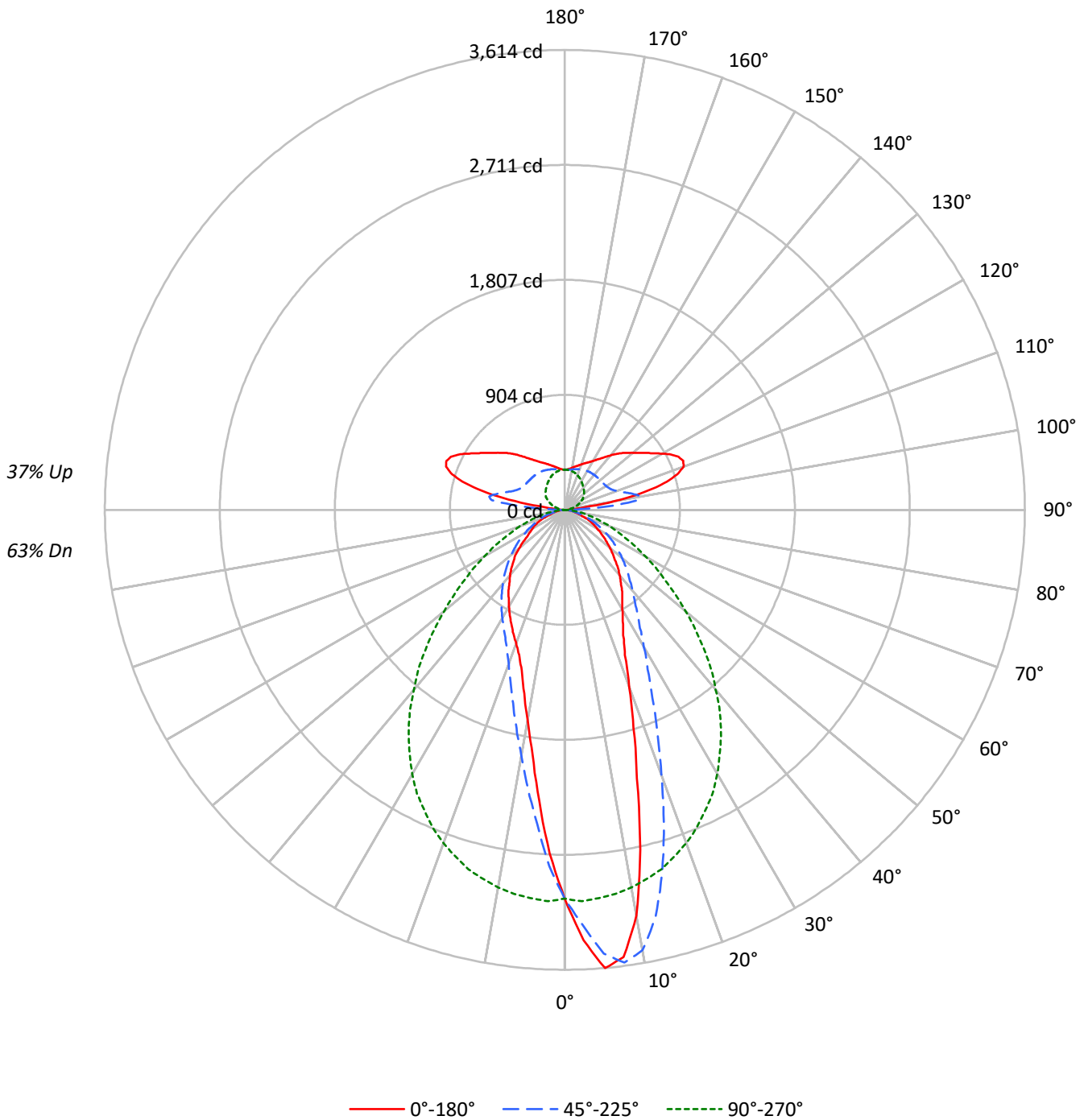
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6421.5 lumens  
Efficiency: N/A  
Efficacy: 102.3 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

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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	110	110	110	110	103	103	103	103	91	91	91	79	79	79	68	68	68	63				
1	102	98	94	91	95	92	89	86	81	79	77	71	69	68	62	61	60	55				
2	94	87	81	76	88	82	77	72	72	68	65	64	61	58	56	54	52	48				
3	86	77	70	65	81	73	67	62	65	60	56	57	54	51	50	48	45	42				
4	79	69	62	56	74	65	59	54	58	53	49	52	48	45	46	43	40	37				
5	73	62	55	49	69	59	52	47	53	48	43	47	43	40	42	39	36	33				
6	68	57	49	43	64	54	47	42	48	43	39	43	39	35	39	35	32	30				
7	64	52	44	39	60	49	42	37	45	39	35	40	35	32	36	32	29	27				
8	59	48	40	35	56	45	39	34	41	35	31	37	33	29	33	30	27	25				
9	56	44	37	32	52	42	35	31	38	33	29	34	30	27	31	27	25	23				
10	52	41	34	29	49	39	32	28	35	30	26	32	28	25	29	26	23	21				

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

	0°	45°	90°	135°	180°
0°	32890	32890	32890	32890	32890
5°	39053	37807	33097	26754	24840
10°	35382	38402	32932	21436	18390
15°	24361	32926	32584	17521	14547
20°	16947	25350	31930	14773	12786
25°	12915	19320	30978	13131	11784
30°	11242	15447	29788	12192	10915
35°	10322	13030	28101	11401	10125
40°	9417	11636	25895	10624	9400
45°	8505	10642	23514	9889	8677
50°	7720	9818	20706	9168	7783
55°	6983	9015	18008	8464	6677
60°	6256	8198	15642	7685	6312
65°	5777	7274	13466	6907	5968
70°	4692	6288	11748	6250	4850
75°	4117	5003	9952	5186	4271
80°	3725	4234	8151	4351	4035
85°	3409	3717	6187	3940	3717

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 80°  
 Vertical Angle: 45°  
 Luminance: 24811 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	278.5	4.3
10°-20°	644.5	10.0
20°-30°	739.4	11.5
30°-40°	728.8	11.3
40°-50°	642.7	10.0
50°-60°	494.5	7.7
60°-70°	325.1	5.1
70°-80°	157.9	2.5
80°-90°	41.5	0.6
90°-100°	170.9	2.7
100°-110°	500.3	7.8
110°-120°	488.5	7.6
120°-130°	389.1	6.1
130°-140°	307.0	4.8
140°-150°	229.0	3.6
150°-160°	159.7	2.5
160°-170°	93.8	1.5
170°-180°	30.5	0.5
0°-30°	1662.4	25.9
0°-40°	2391.2	37.2
0°-60°	3528.4	54.9
0°-90°	4052.9	63.1
90°-120°	1159.6	18.1
90°-150°	2084.6	32.5
90°-180°	2369.0	36.9
0°-180°	6421.5	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	3056	3056	3056	3056	3056	
5°	3614	3499	3063	2476	2299	330
15°	2186	2955	2924	1572	1305	617
25°	1087	1627	2608	1106	992	514
35°	786	992	2138	868	770	490
45°	559	699	1545	650	570	434
55°	372	480	960	451	356	334
65°	227	286	529	271	234	222
75°	99	120	239	125	103	107
85°	28	30	50	32	30	29
90°	18	16	1	16	18	11
95°	74	378	22	378	74	120
105°	811	512	74	512	811	809
115°	986	392	131	392	986	962
125°	778	366	182	366	778	704
135°	630	361	213	361	630	489
145°	493	356	243	356	493	313
155°	409	345	276	345	409	190
165°	356	330	302	330	356	102
175°	321	317	314	317	321	31
180°	315	315	315	315	315	

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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	3055.6	3055.6	3055.6	3055.6	3055.6	3055.6	3055.6	3055.6	3055.6	3055.6	3055.6
2.5°	3386.3	3375.6	3365.0	3361.9	3358.7	3348.7	3338.7	3316.1	3293.6	3270.4	3247.2
5°	3614.3	3615.6	3616.8	3613.7	3610.5	3597.4	3584.2	3556.7	3529.1	3499.0	3469.0
7.5°	3544.1	3564.2	3584.2	3588.0	3591.8	3601.8	3611.8	3605.5	3599.3	3588.0	3576.7
10°	3237.2	3236.0	3234.7	3257.3	3279.8	3346.8	3413.9	3448.3	3482.8	3513.5	3544.1
12.5°	2736.1	2738.0	2739.9	2813.8	2887.7	2950.9	3014.2	3101.9	3189.6	3284.2	3378.8
15°	2186.1	2216.8	2247.5	2313.3	2379.1	2474.3	2569.5	2687.2	2805.0	2954.7	3104.4
17.5°	1795.2	1808.4	1821.6	1884.8	1948.1	2038.3	2128.5	2261.9	2395.3	2588.3	2781.2
20°	1479.5	1491.4	1503.3	1549.1	1594.8	1681.2	1767.7	1894.8	2022.0	2213.1	2404.1
22.5°	1235.3	1258.4	1281.6	1312.3	1343.0	1405.6	1468.3	1597.9	1727.6	1901.7	2075.9
25°	1087.4	1098.1	1108.7	1135.0	1161.3	1221.5	1281.6	1367.4	1453.2	1626.7	1800.3
27.5°	987.2	990.3	993.5	1012.9	1032.3	1071.1	1110.0	1189.5	1269.1	1411.9	1554.7
30°	904.5	910.2	915.8	930.8	945.9	974.0	1002.2	1058.6	1115.0	1242.8	1370.6
32.5°	840.6	843.8	846.9	859.4	871.9	892.6	913.3	957.8	1002.2	1100.0	1197.7
35°	785.5	786.1	786.8	796.1	805.5	825.6	845.6	882.6	919.5	991.6	1063.6
37.5°	722.9	727.2	731.6	738.5	745.4	762.9	780.5	810.6	840.6	900.1	959.6
40°	670.2	674.0	677.8	685.9	694.0	707.8	721.6	749.2	776.7	828.1	879.5
42.5°	617.6	620.1	622.6	630.8	638.9	655.8	672.7	694.7	716.6	759.2	801.8
45°	558.7	565.0	571.3	580.0	588.8	603.2	617.6	640.2	662.7	699.1	735.4
47.5°	509.9	513.0	516.1	523.7	531.2	548.7	566.3	586.3	606.4	640.2	674.0
50°	461.0	462.3	463.5	470.4	477.3	493.0	508.6	531.8	555.0	586.3	617.6
52.5°	414.7	417.8	420.9	427.8	434.7	445.4	456.0	479.8	503.6	534.3	565.0
55°	372.1	374.0	375.8	380.8	385.9	398.4	410.9	431.6	452.3	480.4	508.6
57.5°	332.0	334.5	337.0	340.8	344.5	355.8	367.1	385.2	403.4	431.6	459.8
60°	290.6	293.8	296.9	301.3	305.7	314.5	323.2	339.5	355.8	380.8	405.9
62.5°	260.6	261.2	261.8	265.6	269.4	275.6	281.9	295.0	308.2	333.2	358.3
65°	226.8	228.6	230.5	232.4	234.3	239.3	244.3	255.6	266.8	285.6	304.4
67.5°	191.7	193.6	195.4	198.6	201.7	206.1	210.5	218.0	225.5	243.0	260.6
70°	149.1	149.1	149.1	154.1	159.1	166.6	174.1	179.8	185.4	199.8	214.2
72.5°	121.5	122.1	122.8	123.4	124.0	128.4	132.8	142.2	151.6	160.4	169.1
75°	99.0	99.6	100.2	100.8	101.5	102.7	104.0	107.1	110.2	120.3	130.3
77.5°	78.9	79.6	80.2	80.8	81.4	82.7	83.9	85.2	86.4	90.2	94.0
80°	60.1	60.8	61.4	62.0	62.6	63.3	63.9	65.1	66.4	68.3	70.2
82.5°	43.8	43.8	43.8	43.8	43.8	45.1	46.4	46.4	46.4	47.6	48.9
85°	27.6	27.6	27.6	28.2	28.8	28.8	28.8	29.4	30.1	30.1	30.1
87.5°	12.5	11.9	11.3	11.9	12.5	12.5	12.5	13.2	13.8	13.8	13.8
90°	18.5	19.1	18.5	17.8	18.5	17.2	16.6	15.9	15.3	15.9	14.0
92.5°	33.8	35.1	34.4	37.0	38.2	42.7	49.1	63.1	88.6	118.6	131.3
95°	73.9	76.5	81.0	86.7	98.8	121.7	155.5	229.5	306.6	378.0	336.6
97.5°	151.7	158.7	174.0	198.2	240.9	313.6	397.7	527.1	601.1	581.3	434.1
100°	399.7	399.0	423.9	470.4	534.8	625.3	699.9	751.5	729.2	603.6	407.9
102.5°	633.0	651.4	671.2	705.6	752.2	801.2	836.9	826.1	735.6	562.2	369.7
105°	810.8	814.0	834.4	858.6	887.9	904.5	892.4	828.6	695.4	512.5	339.7
107.5°	926.8	933.8	942.1	953.6	957.4	940.2	890.5	790.4	638.1	468.5	318.1
110°	993.1	994.4	995.6	990.5	972.7	928.1	847.8	730.5	584.5	432.2	306.6



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	1006.5	1005.8	999.5	981.0	944.7	884.1	791.7	671.2	538.0	407.9	300.2
115°	986.1	982.9	970.1	942.1	894.3	824.8	731.1	620.2	502.3	392.0	299.6
117.5°	941.5	937.0	917.9	886.6	836.9	764.9	678.8	580.7	478.7	381.2	300.2
120°	882.8	879.0	863.7	828.0	777.6	713.3	636.8	550.7	460.9	374.2	302.8
122.5°	828.0	822.9	805.7	774.5	731.1	672.5	603.0	527.1	446.2	369.7	307.2
125°	777.6	773.2	757.3	729.2	688.4	637.4	576.2	506.7	434.1	365.9	311.7
127.5°	734.3	730.5	715.8	691.6	654.6	607.5	551.4	488.3	422.6	364.0	316.8
130°	698.6	693.5	680.1	657.2	623.4	580.0	528.4	471.1	413.7	362.1	321.9
132.5°	663.6	660.4	648.9	625.9	594.7	553.9	506.7	455.1	405.4	361.4	325.7
135°	630.4	625.9	614.5	595.3	564.1	527.8	486.3	441.1	398.4	360.8	329.5
137.5°	595.3	591.5	582.0	562.2	535.4	502.9	466.0	427.7	392.0	359.5	332.1
140°	558.4	559.0	548.8	531.0	506.7	479.3	448.7	416.2	386.3	358.9	334.6
142.5°	524.0	524.6	515.7	500.4	480.6	457.7	432.2	405.4	381.2	357.6	336.6
145°	492.7	491.4	486.3	473.0	457.0	438.5	418.1	397.1	376.7	356.3	337.2
147.5°	466.0	465.3	460.2	450.7	437.9	424.5	407.3	390.1	372.3	354.4	337.2
150°	443.0	443.0	439.2	432.2	422.6	410.5	397.1	382.4	367.8	351.9	337.2
152.5°	423.9	423.9	422.0	415.6	408.6	399.0	387.5	375.4	362.7	348.7	335.3
155°	408.6	407.9	406.7	401.6	395.8	388.2	378.6	368.4	357.6	344.8	334.0
157.5°	393.9	393.9	392.6	388.8	383.7	377.4	369.7	360.8	351.9	341.7	332.1
160°	379.9	380.5	380.5	376.7	372.3	367.8	361.4	354.4	346.1	337.8	330.8
162.5°	367.2	367.8	367.8	364.6	362.1	358.2	352.5	346.8	340.4	334.0	328.3
165°	356.3	356.3	357.0	354.4	351.9	348.7	344.2	340.4	335.3	330.2	325.7
167.5°	345.5	345.5	346.1	344.2	342.9	340.4	337.8	334.6	330.2	326.4	323.2
170°	335.9	335.9	336.6	335.3	334.6	333.4	330.8	328.9	325.7	322.5	320.6
172.5°	327.0	327.6	328.9	327.6	327.6	327.0	325.1	323.8	321.3	319.3	318.7
175°	320.6	321.3	321.9	321.3	321.3	321.3	320.0	319.3	318.1	316.8	316.8
177.5°	316.2	316.2	317.4	316.8	317.4	317.4	316.8	316.2	315.5	314.9	315.5
180°	314.9	314.9	314.9	314.9	314.9	314.9	314.9	314.9	314.9	314.9	314.9

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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	3055.6	3055.6	3055.6	3055.6	3055.6	3055.6	3055.6	3055.6	3055.6	3055.6	3055.6
2.5°	3244.1	3241.0	3210.9	3180.8	3151.4	3122.0	3100.0	3078.1	3041.2	3004.2	2981.0
5°	3445.2	3421.4	3373.8	3326.2	3254.8	3183.3	3123.2	3063.1	2986.7	2910.2	2846.3
7.5°	3557.3	3537.9	3480.3	3422.6	3328.0	3233.5	3139.5	3045.5	2932.8	2820.0	2723.6
10°	3560.4	3576.7	3529.1	3481.5	3375.0	3268.5	3140.7	3013.0	2861.4	2709.8	2585.1
12.5°	3448.9	3519.1	3509.1	3499.0	3390.7	3282.3	3127.0	2971.6	2785.6	2599.5	2443.6
15°	3240.3	3376.3	3416.4	3456.5	3366.9	3277.3	3100.7	2924.0	2705.4	2486.8	2307.6
17.5°	2971.6	3162.0	3267.9	3373.8	3308.6	3243.5	3049.9	2856.4	2610.2	2364.0	2169.2
20°	2653.4	2902.7	3068.7	3234.7	3210.9	3187.1	2987.3	2787.5	2521.9	2256.3	2045.2
22.5°	2339.0	2602.0	2831.3	3060.6	3085.0	3109.4	2907.7	2706.0	2415.4	2124.7	1909.9
25°	2067.7	2335.2	2608.3	2881.4	2936.5	2991.7	2800.0	2608.3	2307.0	2005.7	1792.1
27.5°	1809.0	2063.3	2364.0	2664.7	2764.9	2865.1	2689.7	2514.4	2200.5	1886.7	1673.7
30°	1597.9	1825.3	2132.3	2439.2	2578.9	2718.6	2557.6	2396.6	2085.3	1774.0	1565.4
32.5°	1401.2	1604.8	1913.0	2221.2	2383.4	2545.7	2406.6	2267.6	1968.1	1668.7	1462.6
35°	1245.9	1428.2	1715.7	2003.2	2184.9	2366.5	2252.5	2138.5	1846.0	1553.5	1358.7
37.5°	1112.5	1265.3	1535.3	1805.3	1998.2	2191.1	2095.9	2000.7	1725.7	1450.7	1266.6
40°	1002.2	1125.0	1376.2	1627.4	1816.5	2005.7	1924.3	1842.9	1596.7	1350.5	1178.2
42.5°	907.6	1013.5	1239.0	1464.5	1638.0	1811.5	1757.7	1703.8	1480.8	1257.8	1098.1
45°	824.3	913.3	1111.9	1310.4	1470.2	1629.9	1587.3	1544.7	1352.4	1160.1	1013.5
47.5°	750.4	826.8	1004.1	1181.4	1324.8	1468.3	1428.8	1389.3	1230.2	1071.1	937.7
50°	682.8	747.9	895.7	1043.6	1172.6	1301.6	1269.1	1236.5	1105.0	973.4	858.2
52.5°	618.9	672.7	805.5	938.3	1042.3	1146.3	1121.2	1096.2	994.7	893.2	788.6
55°	558.1	607.6	719.7	831.9	920.8	1009.7	984.7	959.6	880.7	801.8	709.7
57.5°	503.0	546.2	637.0	727.9	798.7	869.4	857.5	845.6	779.9	714.1	638.3
60°	444.7	483.6	561.9	640.2	697.2	754.2	740.4	726.6	679.6	632.7	567.5
62.5°	392.7	427.2	489.8	552.5	598.8	645.2	635.2	625.1	589.4	553.7	499.9
65°	338.3	372.1	422.8	473.6	509.9	546.2	537.4	528.7	501.7	474.8	431.6
67.5°	288.8	317.0	360.8	404.7	429.1	453.5	448.5	443.5	422.8	402.1	368.3
70°	238.7	263.1	299.4	335.7	352.7	369.6	371.5	373.3	354.5	335.7	310.7
72.5°	188.5	208.0	241.8	275.6	288.8	301.9	301.3	300.7	289.4	278.1	255.6
75°	144.7	159.1	185.4	211.7	223.0	234.3	236.8	239.3	228.6	218.0	205.5
77.5°	104.0	114.0	134.0	154.1	166.6	179.1	180.4	181.7	176.6	171.6	159.7
80°	73.3	76.4	88.9	101.5	114.6	127.8	129.7	131.5	126.5	121.5	114.0
82.5°	50.7	52.6	57.0	61.4	72.0	82.7	85.2	87.7	85.2	82.7	74.5
85°	30.7	31.3	33.2	35.1	40.1	45.1	47.6	50.1	48.9	47.6	43.2
87.5°	13.8	13.8	14.4	15.0	16.3	17.5	20.7	23.8	21.9	20.0	18.2
90°	12.1	10.2	8.3	7.0	5.7	3.8	2.5	1.3	2.5	3.8	5.7
92.5°	98.2	64.4	44.0	32.5	26.1	20.4	14.0	9.6	14.0	20.4	26.1
95°	232.0	137.0	82.9	58.0	41.4	30.6	23.6	21.7	23.6	30.6	41.4
97.5°	258.2	147.9	94.3	66.9	50.4	40.8	35.1	34.4	35.1	40.8	50.4
100°	240.3	146.0	101.3	76.5	61.2	52.3	47.8	47.2	47.8	52.3	61.2
102.5°	225.0	148.5	109.6	87.3	73.9	65.7	61.8	60.6	61.8	65.7	73.9
105°	219.3	153.6	119.2	99.4	87.3	79.7	75.9	73.9	75.9	79.7	87.3
107.5°	218.0	161.9	131.3	112.8	101.3	93.7	89.9	88.0	89.9	93.7	101.3
110°	221.2	172.7	144.1	126.2	115.4	108.4	105.2	103.3	105.2	108.4	115.4





TEST NUMBER: P832025

CATALOG NUMBER: S123RDIP-S1165D805U930-4F0-1E-UDD-G4

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	227.6	183.6	157.4	140.2	129.4	122.4	119.2	117.3	119.2	122.4	129.4
115°	234.6	195.7	171.5	154.3	143.4	137.0	133.2	130.7	133.2	137.0	143.4
117.5°	243.5	208.4	184.2	168.3	156.2	150.4	147.2	144.1	147.2	150.4	156.2
120°	253.7	220.5	197.6	181.7	169.6	163.2	160.0	158.1	160.0	163.2	169.6
122.5°	263.3	233.3	211.0	193.8	182.3	175.3	172.1	170.2	172.1	175.3	182.3
125°	273.5	245.4	223.1	205.9	193.8	186.8	182.9	181.7	182.9	186.8	193.8
127.5°	281.7	256.2	234.6	217.4	204.0	197.0	192.5	190.6	192.5	197.0	204.0
130°	290.0	265.8	244.8	227.6	214.2	206.5	200.8	198.9	200.8	206.5	214.2
132.5°	297.7	274.1	253.7	237.1	223.7	214.2	207.8	205.2	207.8	214.2	223.7
135°	304.0	282.4	262.6	245.4	232.0	222.5	215.4	212.9	215.4	222.5	232.0
137.5°	309.1	288.1	269.0	253.1	239.7	229.5	222.5	219.9	222.5	229.5	239.7
140°	313.0	293.8	275.4	259.4	246.7	236.5	230.1	226.9	230.1	236.5	246.7
142.5°	316.8	298.3	280.5	265.8	253.1	244.1	237.1	234.6	237.1	244.1	253.1
145°	319.3	302.1	285.6	270.9	260.1	250.5	244.8	242.9	244.8	250.5	260.1
147.5°	321.3	305.3	290.0	277.3	266.4	258.2	252.4	251.1	252.4	258.2	266.4
150°	321.9	308.5	293.8	282.4	273.5	265.2	260.1	259.4	260.1	265.2	273.5
152.5°	323.2	310.4	298.3	287.5	279.8	272.8	267.7	267.7	267.7	272.8	279.8
155°	323.2	313.0	302.1	293.2	286.2	279.8	276.0	276.0	276.0	279.8	286.2
157.5°	323.8	314.2	305.3	298.3	291.9	286.2	283.0	282.4	283.0	286.2	291.9
160°	323.8	316.2	308.5	302.1	297.7	292.6	290.0	290.0	290.0	292.6	297.7
162.5°	323.2	316.8	310.4	305.3	301.5	297.7	295.8	295.8	295.8	297.7	301.5
165°	321.9	317.4	312.3	307.9	305.3	302.1	300.9	301.5	300.9	302.1	305.3
167.5°	321.3	317.4	313.6	310.4	308.5	306.0	305.3	306.0	305.3	306.0	308.5
170°	319.3	316.8	313.6	312.3	311.1	309.1	308.5	309.8	308.5	309.1	311.1
172.5°	318.7	316.8	314.2	313.6	313.0	311.7	311.7	312.3	311.7	311.7	313.0
175°	317.4	316.2	314.9	314.2	314.2	313.0	313.6	314.2	313.6	313.0	314.2
177.5°	316.8	315.5	314.9	314.9	314.9	314.2	314.9	315.5	314.9	314.2	314.9
180°	314.9	314.9	314.9	314.9	314.9	314.9	314.9	314.9	314.9	314.9	314.9



TEST NUMBER: P832025

CATALOG NUMBER: S123RDIP-S1165D805U930-4F0-1E-UDD-G4

**CANDELA DISTRIBUTION (continued):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	3055.6	3055.6	3055.6	3055.6	3055.6	3055.6	3055.6	3055.6	3055.6	3055.6	3055.6
2.5°	2957.8	2922.1	2886.4	2860.7	2835.1	2803.1	2771.2	2769.9	2768.7	2744.9	2721.1
5°	2782.4	2720.4	2658.4	2597.7	2536.9	2476.1	2415.4	2401.6	2387.8	2367.1	2346.5
7.5°	2627.1	2528.1	2429.2	2351.5	2273.8	2213.1	2152.3	2111.0	2069.6	2037.7	2005.7
10°	2460.5	2337.7	2214.9	2121.0	2027.0	1961.2	1895.5	1847.9	1800.3	1777.7	1755.2
12.5°	2287.6	2154.2	2020.8	1928.7	1836.6	1757.7	1678.7	1635.5	1592.3	1561.0	1529.7
15°	2128.5	1985.0	1841.6	1743.9	1646.2	1572.3	1498.3	1455.1	1411.9	1380.6	1349.3
17.5°	1974.4	1829.7	1685.0	1586.0	1487.1	1420.0	1353.0	1311.0	1269.1	1249.7	1230.2
20°	1834.1	1688.1	1542.2	1448.9	1355.5	1289.7	1224.0	1201.4	1178.9	1160.7	1142.5
22.5°	1695.0	1554.7	1414.4	1324.8	1235.3	1187.6	1140.0	1121.9	1103.7	1089.9	1076.1
25°	1578.5	1438.8	1299.1	1220.8	1142.5	1105.6	1068.6	1056.7	1044.8	1031.0	1017.3
27.5°	1460.8	1328.0	1195.2	1132.5	1069.9	1039.8	1009.7	994.7	979.7	968.4	957.1
30°	1356.8	1234.0	1111.2	1059.2	1007.2	980.9	954.6	938.3	922.1	911.4	900.8
32.5°	1256.5	1147.6	1038.6	994.1	949.6	923.9	898.3	882.6	866.9	854.4	841.9
35°	1163.8	1069.3	974.7	934.0	893.2	867.6	841.9	826.2	810.6	798.0	785.5
37.5°	1082.4	996.6	910.8	872.6	834.4	811.8	789.3	773.0	756.7	743.5	730.4
40°	1006.0	930.2	854.4	817.4	780.5	756.1	731.6	717.2	702.8	690.9	679.0
42.5°	938.3	868.8	799.3	762.9	726.6	703.4	680.3	663.4	646.4	639.5	632.7
45°	866.9	805.5	744.2	709.1	674.0	649.6	625.1	610.7	596.3	590.1	583.8
47.5°	804.3	747.3	690.3	655.8	621.4	599.5	577.5	566.3	555.0	546.2	537.4
50°	742.9	687.8	632.7	599.5	566.3	547.5	528.7	514.9	501.1	494.9	488.6
52.5°	684.0	633.9	583.8	550.0	516.1	498.0	479.8	467.9	456.0	442.9	429.7
55°	617.6	573.8	529.9	499.9	469.8	451.0	432.2	418.4	404.7	390.9	377.1
57.5°	562.5	519.3	476.1	449.1	422.2	404.0	385.9	370.8	355.8	344.5	333.2
60°	502.4	464.8	427.2	400.9	374.6	357.0	339.5	325.1	310.7	305.1	299.4
62.5°	446.0	410.9	375.8	352.7	329.5	312.6	295.7	286.3	276.9	273.1	269.4
65°	388.4	358.3	328.2	306.9	285.6	271.2	256.8	252.4	248.1	244.9	241.8
67.5°	334.5	308.8	283.1	264.3	245.5	235.5	225.5	220.5	215.5	211.7	208.0
70°	285.6	263.1	240.5	224.2	208.0	198.6	189.2	184.8	180.4	173.5	166.6
72.5°	233.0	215.5	197.9	185.4	172.9	164.7	156.6	147.8	139.1	132.8	126.5
75°	192.9	175.4	157.9	146.0	134.0	124.7	115.3	112.1	109.0	107.1	105.2
77.5°	147.8	132.8	117.8	108.4	99.0	94.6	90.2	88.3	86.4	85.8	85.2
80°	106.5	94.0	81.4	76.4	71.4	70.2	68.9	67.7	66.4	65.8	65.1
82.5°	66.4	60.1	53.9	52.6	51.4	50.7	50.1	49.5	48.9	48.2	47.6
85°	38.8	36.3	33.8	33.2	32.6	31.9	31.3	31.3	31.3	31.3	31.3
87.5°	16.3	16.3	16.3	16.3	16.3	16.3	16.3	16.3	16.3	15.7	15.0
90°	7.0	8.3	10.2	12.1	14.0	15.9	15.3	15.9	16.6	17.2	18.5
92.5°	32.5	44.0	64.4	98.2	131.3	118.6	88.6	63.1	49.1	42.7	38.2
95°	58.0	82.9	137.0	232.0	336.6	378.0	306.6	229.5	155.5	121.7	98.8
97.5°	66.9	94.3	147.9	258.2	434.1	581.3	601.1	527.1	397.7	313.6	240.9
100°	76.5	101.3	146.0	240.3	407.9	603.6	729.2	751.5	699.9	625.3	534.8
102.5°	87.3	109.6	148.5	225.0	369.7	562.2	735.6	826.1	836.9	801.2	752.2
105°	99.4	119.2	153.6	219.3	339.7	512.5	695.4	828.6	892.4	904.5	887.9
107.5°	112.8	131.3	161.9	218.0	318.1	468.5	638.1	790.4	890.5	940.2	957.4
110°	126.2	144.1	172.7	221.2	306.6	432.2	584.5	730.5	847.8	928.1	972.7



TEST NUMBER: P832025

CATALOG NUMBER: S123RDIP-S1165D805U930-4F0-1E-UDD-G4

**CANDELA DISTRIBUTION (continued):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	140.2	157.4	183.6	227.6	300.2	407.9	538.0	671.2	791.7	884.1	944.7
115°	154.3	171.5	195.7	234.6	299.6	392.0	502.3	620.2	731.1	824.8	894.3
117.5°	168.3	184.2	208.4	243.5	300.2	381.2	478.7	580.7	678.8	764.9	836.9
120°	181.7	197.6	220.5	253.7	302.8	374.2	460.9	550.7	636.8	713.3	777.6
122.5°	193.8	211.0	233.3	263.3	307.2	369.7	446.2	527.1	603.0	672.5	731.1
125°	205.9	223.1	245.4	273.5	311.7	365.9	434.1	506.7	576.2	637.4	688.4
127.5°	217.4	234.6	256.2	281.7	316.8	364.0	422.6	488.3	551.4	607.5	654.6
130°	227.6	244.8	265.8	290.0	321.9	362.1	413.7	471.1	528.4	580.0	623.4
132.5°	237.1	253.7	274.1	297.7	325.7	361.4	405.4	455.1	506.7	553.9	594.7
135°	245.4	262.6	282.4	304.0	329.5	360.8	398.4	441.1	486.3	527.8	564.1
137.5°	253.1	269.0	288.1	309.1	332.1	359.5	392.0	427.7	466.0	502.9	535.4
140°	259.4	275.4	293.8	313.0	334.6	358.9	386.3	416.2	448.7	479.3	506.7
142.5°	265.8	280.5	298.3	316.8	336.6	357.6	381.2	405.4	432.2	457.7	480.6
145°	270.9	285.6	302.1	319.3	337.2	356.3	376.7	397.1	418.1	438.5	457.0
147.5°	277.3	290.0	305.3	321.3	337.2	354.4	372.3	390.1	407.3	424.5	437.9
150°	282.4	293.8	308.5	321.9	337.2	351.9	367.8	382.4	397.1	410.5	422.6
152.5°	287.5	298.3	310.4	323.2	335.3	348.7	362.7	375.4	387.5	399.0	408.6
155°	293.2	302.1	313.0	323.2	334.0	344.8	357.6	368.4	378.6	388.2	395.8
157.5°	298.3	305.3	314.2	323.8	332.1	341.7	351.9	360.8	369.7	377.4	383.7
160°	302.1	308.5	316.2	323.8	330.8	337.8	346.1	354.4	361.4	367.8	372.3
162.5°	305.3	310.4	316.8	323.2	328.3	334.0	340.4	346.8	352.5	358.2	362.1
165°	307.9	312.3	317.4	321.9	325.7	330.2	335.3	340.4	344.2	348.7	351.9
167.5°	310.4	313.6	317.4	321.3	323.2	326.4	330.2	334.6	337.8	340.4	342.9
170°	312.3	313.6	316.8	319.3	320.6	322.5	325.7	328.9	330.8	333.4	334.6
172.5°	313.6	314.2	316.8	318.7	318.7	319.3	321.3	323.8	325.1	327.0	327.6
175°	314.2	314.9	316.2	317.4	316.8	316.8	318.1	319.3	320.0	321.3	321.3
177.5°	314.9	314.9	315.5	316.8	315.5	314.9	315.5	316.2	316.8	317.4	317.4
180°	314.9	314.9	314.9	314.9	314.9	314.9	314.9	314.9	314.9	314.9	314.9



TEST NUMBER: P832025

CATALOG NUMBER: S123RDIP-S1165D805U930-4F0-1E-UDD-G4

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
0°	3055.6	3055.6	3055.6	3055.6
2.5°	2714.8	2708.5	2706.0	2703.5
5°	2327.1	2307.6	2303.3	2298.9
7.5°	1997.6	1989.4	1962.5	1935.6
10°	1730.1	1705.0	1693.8	1682.5
12.5°	1506.5	1483.3	1479.5	1475.8
15°	1333.0	1316.7	1311.0	1305.4
17.5°	1219.0	1207.7	1200.8	1193.9
20°	1134.4	1126.3	1121.2	1116.2
22.5°	1069.9	1063.6	1059.9	1056.1
25°	1007.9	998.5	995.3	992.2
27.5°	949.0	940.8	937.7	934.6
30°	893.9	887.0	882.6	878.2
32.5°	833.7	825.6	823.1	820.6
35°	780.5	775.5	773.0	770.5
37.5°	724.1	717.8	714.1	710.3
40°	675.9	672.7	670.9	669.0
42.5°	627.0	621.4	620.8	620.1
45°	578.2	572.5	571.3	570.0
47.5°	532.4	527.4	526.8	526.2
50°	481.7	474.8	469.8	464.8
52.5°	423.4	417.2	412.8	408.4
55°	370.2	363.3	359.6	355.8
57.5°	330.1	327.0	325.1	323.2
60°	297.5	295.7	294.4	293.2
62.5°	267.5	265.6	265.6	265.6
65°	239.9	238.0	236.2	234.3
67.5°	204.2	200.4	199.8	199.2
70°	161.0	155.3	154.7	154.1
72.5°	125.9	125.3	124.0	122.8
75°	104.0	102.7	102.7	102.7
77.5°	83.9	82.7	82.7	82.7
80°	64.5	63.9	64.5	65.1
82.5°	47.6	47.6	47.0	46.4
85°	30.7	30.1	30.1	30.1
87.5°	15.0	15.0	15.0	15.0
90°	17.8	18.5	19.1	18.5
92.5°	37.0	34.4	35.1	33.8
95°	86.7	81.0	76.5	73.9
97.5°	198.2	174.0	158.7	151.7
100°	470.4	423.9	399.0	399.7
102.5°	705.6	671.2	651.4	633.0
105°	858.6	834.4	814.0	810.8
107.5°	953.6	942.1	933.8	926.8
110°	990.5	995.6	994.4	993.1



TEST NUMBER: P832025

CATALOG NUMBER: S123RDIP-S1165D805U930-4F0-1E-UDD-G4

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
112.5°	981.0	999.5	1005.8	1006.5
115°	942.1	970.1	982.9	986.1
117.5°	886.6	917.9	937.0	941.5
120°	828.0	863.7	879.0	882.8
122.5°	774.5	805.7	822.9	828.0
125°	729.2	757.3	773.2	777.6
127.5°	691.6	715.8	730.5	734.3
130°	657.2	680.1	693.5	698.6
132.5°	625.9	648.9	660.4	663.6
135°	595.3	614.5	625.9	630.4
137.5°	562.2	582.0	591.5	595.3
140°	531.0	548.8	559.0	558.4
142.5°	500.4	515.7	524.6	524.0
145°	473.0	486.3	491.4	492.7
147.5°	450.7	460.2	465.3	466.0
150°	432.2	439.2	443.0	443.0
152.5°	415.6	422.0	423.9	423.9
155°	401.6	406.7	407.9	408.6
157.5°	388.8	392.6	393.9	393.9
160°	376.7	380.5	380.5	379.9
162.5°	364.6	367.8	367.8	367.2
165°	354.4	357.0	356.3	356.3
167.5°	344.2	346.1	345.5	345.5
170°	335.3	336.6	335.9	335.9
172.5°	327.6	328.9	327.6	327.0
175°	321.3	321.9	321.3	320.6
177.5°	316.8	317.4	316.2	316.2
180°	314.9	314.9	314.9	314.9



TEST NUMBER: P832025

CATALOG NUMBER: S123RDIP-S1165D805U930-4F0-1E-UDD-G4

**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	14.04	14.96	14.88	15.82	16.89	18.70	19.62	19.55	20.48	21.56
	3H	15.26	16.09	16.13	16.96	18.06	20.21	21.03	21.07	21.90	23.00
	4H	15.65	16.42	16.53	17.30	18.42	20.70	21.47	21.58	22.35	23.47
	6H	15.94	16.65	16.82	17.53	18.66	21.02	21.73	21.91	22.61	23.74
	8H	16.03	16.70	16.92	17.60	18.73	21.10	21.77	21.99	22.68	23.80
	12H	16.08	16.72	16.98	17.62	18.77	21.13	21.78	22.03	22.67	23.82
4H	2H	14.77	15.54	15.65	16.42	17.53	18.71	19.48	19.59	20.36	21.47
	3H	16.15	16.79	17.04	17.70	18.83	20.37	21.01	21.26	21.92	23.05
	4H	16.61	17.19	17.51	18.10	19.25	20.98	21.57	21.89	22.47	23.63
	6H	16.98	17.48	17.90	18.41	19.57	21.42	21.93	22.34	22.86	24.01
	8H	17.10	17.57	18.02	18.50	19.67	21.56	22.03	22.48	22.95	24.12
	12H	17.18	17.61	18.12	18.55	19.72	21.62	22.04	22.56	22.99	24.16
8H	4H	16.93	17.39	17.85	18.32	19.49	20.95	21.42	21.88	22.35	23.52
	6H	17.39	17.78	18.34	18.74	19.91	21.45	21.84	22.40	22.81	23.98
	8H	17.59	17.93	18.54	18.88	20.07	21.64	21.98	22.60	22.94	24.12
	12H	17.73	18.03	18.69	18.98	20.22	21.76	22.06	22.72	23.01	24.25
12H	4H	16.94	17.36	17.88	18.30	19.48	20.91	21.33	21.85	22.27	23.45
	6H	17.45	17.79	18.41	18.75	19.94	21.43	21.77	22.38	22.73	23.91
	8H	17.67	17.97	18.63	18.92	20.16	21.63	21.93	22.58	22.87	24.11