

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: P832235

Luminaire Tested: S123RDIP-S560D365U850-4F0-1E-UDD-G4

Issue Date: 05/03/2024

Test Information

Test Method: LM-79-2019
Report Number: P832235
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-S560D365U850-4F0-1E-UDD-G4
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 560 LUMENS PER FOOT, GRAZE OPTIC
UPLIGHT 365 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: -

Summary

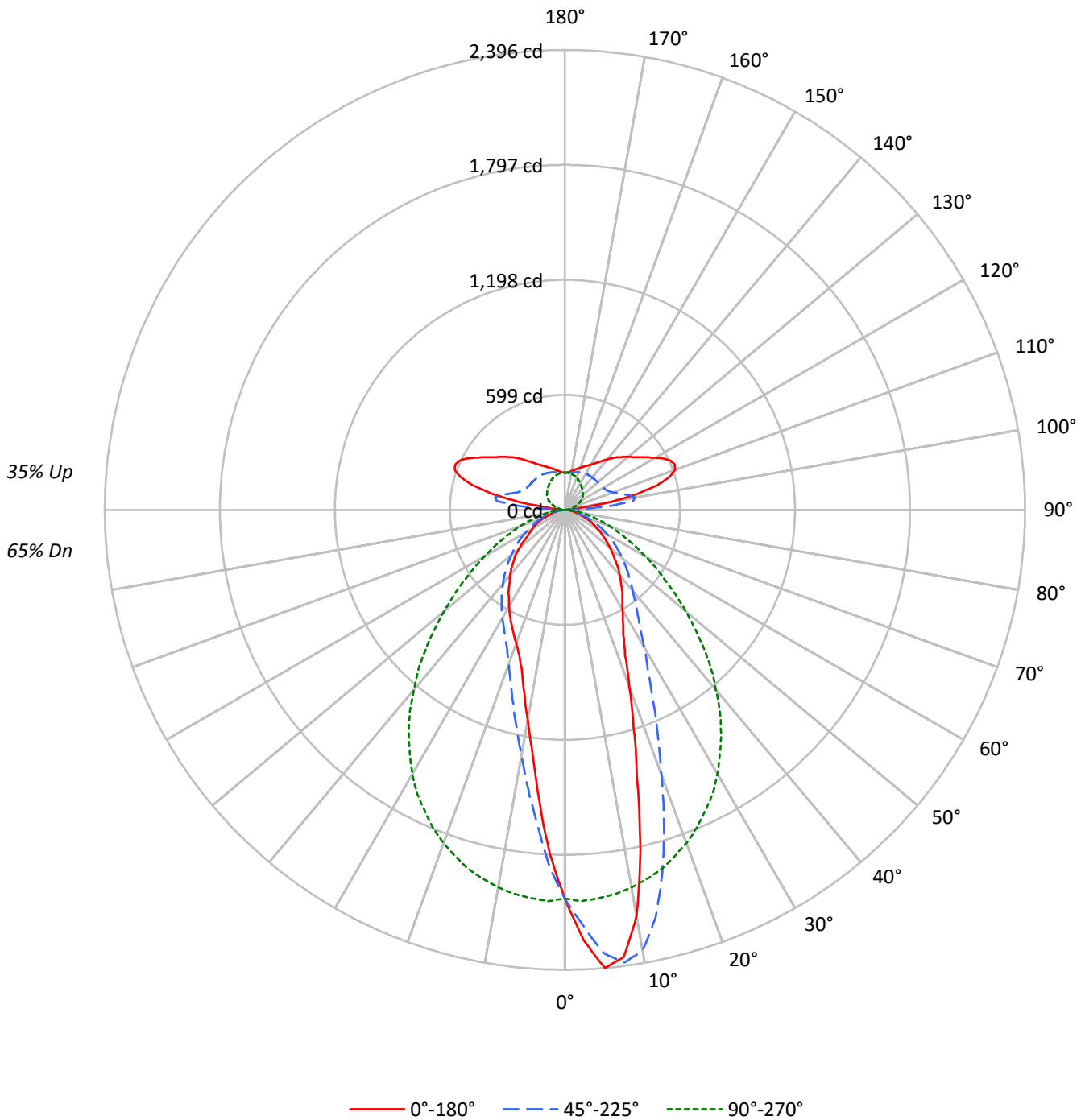
Lumens per Lamp: N/A
Luminaire Lumens: 4142.8 lumens
Efficiency: N/A
Efficacy: 140.0 lumens/watt
Spacing Criteria (0/90/45): 0.55 / 1.17 / 0.8
Luminous Opening: Rectangular (W 4' x L: 0.25' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 29.6
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																		
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	50	30	10	50	30	10	0																
RCR																																														
0	111	111	111	111	104	104	104	104	92	92	92	80	80	80	70	70	70	65																												
1	102	98	94	91	96	92	89	86	82	80	77	72	70	69	63	62	61	57																												
2	94	87	81	76	88	82	77	73	73	69	66	65	62	59	57	55	53	49																												
3	86	78	71	65	81	73	67	62	66	61	57	58	55	52	52	49	47	43																												
4	80	70	62	56	75	66	59	54	59	54	50	53	49	45	47	44	41	38																												
5	74	63	55	49	69	60	53	48	54	48	44	48	44	40	43	40	37	34																												
6	69	57	49	44	65	54	47	42	49	43	39	44	40	36	40	36	33	31																												
7	64	52	44	39	60	50	43	38	45	39	35	41	36	33	37	33	30	28																												
8	60	48	40	35	56	46	39	34	42	36	32	38	33	30	34	30	28	25																												
9	56	44	37	32	53	42	36	31	39	33	29	35	31	27	32	28	25	23																												
10	53	41	34	29	50	39	33	28	36	31	27	33	28	25	30	26	23	22																												

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	21801	21801	21801	21801	21801
5°	25887	25061	21939	17735	16466
10°	23455	25456	21829	14210	12190
15°	16148	21826	21599	11614	9643
20°	11234	16804	21165	9793	8475
25°	8561	12807	20535	8704	7811
30°	7452	10239	19745	8081	7235
35°	6842	8637	18628	7557	6711
40°	6243	7713	17165	7043	6232
45°	5638	7054	15586	6555	5751
50°	5117	6507	13725	6077	5159
55°	4628	5977	11937	5611	4425
60°	4148	5436	10370	5096	4183
65°	3828	4821	8925	4579	3955
70°	3109	4170	7789	4142	3213
75°	2728	3315	6596	3435	2832
80°	2473	2808	5405	2882	2678
85°	2260	2458	4100	2618	2458

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 80°
 Vertical Angle: 45°
 Luminance: 16446 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	184.6	4.5
10°-20°	427.2	10.3
20°-30°	490.1	11.8
30°-40°	483.1	11.7
40°-50°	426.0	10.3
50°-60°	327.8	7.9
60°-70°	215.5	5.2
70°-80°	104.7	2.5
80°-90°	27.5	0.7
90°-100°	105.1	2.5
100°-110°	307.6	7.4
110°-120°	300.4	7.2
120°-130°	239.2	5.8
130°-140°	188.7	4.6
140°-150°	140.8	3.4
150°-160°	98.2	2.4
160°-170°	57.7	1.4
170°-180°	18.8	0.5
0°-30°	1102.0	26.6
0°-40°	1585.1	38.3
0°-60°	2338.9	56.5
0°-90°	2686.5	64.8
90°-120°	713.0	17.2
90°-150°	1281.7	30.9
90°-180°	1456.0	35.1
0°-180°	4142.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2025	2025	2025	2025	2025	
5°	2396	2319	2030	1641	1524	219
15°	1449	1959	1938	1042	865	409
25°	721	1078	1729	733	658	340
35°	521	657	1418	575	511	325
45°	370	463	1024	431	378	288
55°	247	318	636	299	236	221
65°	150	189	350	180	155	147
75°	66	80	159	83	68	71
85°	18	20	33	21	20	19
90°	11	10	1	10	11	7
95°	46	232	13	232	46	74
105°	498	315	46	315	498	497
115°	606	241	80	241	606	591
125°	478	225	112	225	478	433
135°	388	222	131	222	388	301
145°	303	219	149	219	303	192
155°	251	212	170	212	251	117
165°	219	203	185	203	219	63
175°	197	195	193	195	197	19
180°	194	194	194	194	194	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	2025.4	2025.4	2025.4	2025.4	2025.4	2025.4	2025.4	2025.4	2025.4	2025.4	2025.4
2.5°	2244.7	2237.6	2230.6	2228.5	2226.4	2219.8	2213.1	2198.2	2183.2	2167.9	2152.5
5°	2395.8	2396.6	2397.5	2395.4	2393.3	2384.6	2375.9	2357.6	2339.3	2319.4	2299.5
7.5°	2349.3	2362.6	2375.9	2378.4	2380.9	2387.5	2394.2	2390.0	2385.8	2378.4	2370.9
10°	2145.9	2145.0	2144.2	2159.1	2174.1	2218.5	2262.9	2285.8	2308.6	2329.0	2349.3
12.5°	1813.7	1814.9	1816.2	1865.2	1914.2	1956.1	1998.0	2056.2	2114.3	2177.0	2239.7
15°	1449.1	1469.5	1489.8	1533.4	1577.0	1640.1	1703.2	1781.3	1859.4	1958.6	2057.8
17.5°	1190.0	1198.7	1207.5	1249.4	1291.3	1351.1	1410.9	1499.4	1587.8	1715.7	1843.6
20°	980.7	988.6	996.5	1026.8	1057.1	1114.4	1171.7	1256.0	1340.3	1467.0	1593.6
22.5°	818.8	834.2	849.5	869.9	890.2	931.8	973.3	1059.2	1145.2	1260.6	1376.0
25°	720.8	727.9	734.9	752.4	769.8	809.7	849.5	906.4	963.3	1078.3	1193.3
27.5°	654.4	656.5	658.5	671.4	684.3	710.0	735.8	788.5	841.2	935.9	1030.6
30°	599.6	603.3	607.1	617.0	627.0	645.7	664.4	701.7	739.1	823.8	908.5
32.5°	557.2	559.3	561.4	569.7	578.0	591.7	605.4	634.9	664.4	729.1	793.9
35°	520.7	521.1	521.5	527.7	534.0	547.3	560.5	585.0	609.5	657.3	705.0
37.5°	479.2	482.1	485.0	489.5	494.1	505.7	517.4	537.3	557.2	596.7	636.1
40°	444.3	446.8	449.3	454.7	460.1	469.2	478.3	496.6	514.9	548.9	583.0
42.5°	409.4	411.1	412.7	418.1	423.5	434.7	445.9	460.5	475.0	503.2	531.5
45°	370.4	374.5	378.7	384.5	390.3	399.9	409.4	424.4	439.3	463.4	487.5
47.5°	338.0	340.1	342.1	347.1	352.1	363.7	375.4	388.6	401.9	424.4	446.8
50°	305.6	306.4	307.3	311.8	316.4	326.8	337.2	352.5	367.9	388.6	409.4
52.5°	274.9	277.0	279.0	283.6	288.2	295.2	302.3	318.1	333.8	354.2	374.5
55°	246.6	247.9	249.1	252.5	255.8	264.1	272.4	286.1	299.8	318.5	337.2
57.5°	220.1	221.7	223.4	225.9	228.4	235.8	243.3	255.4	267.4	286.1	304.8
60°	192.7	194.7	196.8	199.7	202.6	208.4	214.3	225.0	235.8	252.5	269.1
62.5°	172.7	173.1	173.6	176.1	178.5	182.7	186.8	195.6	204.3	220.9	237.5
65°	150.3	151.6	152.8	154.0	155.3	158.6	161.9	169.4	176.9	189.3	201.8
67.5°	127.1	128.3	129.5	131.6	133.7	136.6	139.5	144.5	149.5	161.1	172.7
70°	98.8	98.8	98.8	102.1	105.5	110.4	115.4	119.2	122.9	132.5	142.0
72.5°	80.6	81.0	81.4	81.8	82.2	85.1	88.0	94.3	100.5	106.3	112.1
75°	65.6	66.0	66.4	66.9	67.3	68.1	68.9	71.0	73.1	79.7	86.4
77.5°	52.3	52.7	53.1	53.6	54.0	54.8	55.6	56.5	57.3	59.8	62.3
80°	39.9	40.3	40.7	41.1	41.5	41.9	42.4	43.2	44.0	45.3	46.5
82.5°	29.1	29.1	29.1	29.1	29.1	29.9	30.7	30.7	30.7	31.6	32.4
85°	18.3	18.3	18.3	18.7	19.1	19.1	19.1	19.5	19.9	19.9	19.9
87.5°	8.3	7.9	7.5	7.9	8.3	8.3	8.3	8.7	9.1	9.1	9.1
90°	11.4	11.8	11.4	11.0	11.4	10.6	10.2	9.8	9.4	9.8	8.6
92.5°	20.8	21.6	21.2	22.7	23.5	26.3	30.2	38.8	54.5	72.9	80.7
95°	45.5	47.0	49.8	53.3	60.7	74.9	95.6	141.1	188.5	232.4	206.9
97.5°	93.3	97.6	107.0	121.9	148.1	192.8	244.5	324.1	369.6	357.4	266.9
100°	245.7	245.3	260.6	289.2	328.8	384.5	430.3	462.0	448.3	371.1	250.8
102.5°	389.2	400.5	412.7	433.8	462.4	492.6	514.6	507.9	452.3	345.7	227.3
105°	498.5	500.5	513.0	527.9	545.9	556.1	548.7	509.5	427.6	315.1	208.9
107.5°	569.8	574.1	579.2	586.3	588.6	578.1	547.5	486.0	392.3	288.0	195.6
110°	610.6	611.4	612.1	609.0	598.0	570.6	521.2	449.1	359.4	265.7	188.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	618.8	618.4	614.5	603.1	580.8	543.6	486.7	412.7	330.8	250.8	184.6
115°	606.3	604.3	596.5	579.2	549.8	507.1	449.5	381.3	308.8	241.0	184.2
117.5°	578.8	576.1	564.3	545.1	514.6	470.3	417.4	357.0	294.3	234.4	184.6
120°	542.8	540.4	531.0	509.1	478.1	438.5	391.5	338.6	283.3	230.0	186.2
122.5°	509.1	505.9	495.4	476.2	449.5	413.5	370.7	324.1	274.3	227.3	188.9
125°	478.1	475.4	465.6	448.3	423.3	391.9	354.3	311.6	266.9	225.0	191.6
127.5°	451.5	449.1	440.1	425.2	402.5	373.5	339.0	300.2	259.8	223.8	194.8
130°	429.5	426.4	418.2	404.0	383.3	356.6	324.9	289.6	254.3	222.6	197.9
132.5°	408.0	406.0	399.0	384.8	365.6	340.6	311.6	279.8	249.2	222.2	200.3
135°	387.6	384.8	377.8	366.0	346.8	324.5	299.0	271.2	244.9	221.8	202.6
137.5°	366.0	363.7	357.8	345.7	329.2	309.2	286.5	263.0	241.0	221.0	204.2
140°	343.3	343.7	337.4	326.5	311.6	294.7	275.9	255.9	237.5	220.6	205.7
142.5°	322.1	322.5	317.0	307.6	295.5	281.4	265.7	249.2	234.4	219.9	206.9
145°	302.9	302.2	299.0	290.8	281.0	269.6	257.1	244.2	231.6	219.1	207.3
147.5°	286.5	286.1	283.0	277.1	269.2	261.0	250.4	239.8	228.9	217.9	207.3
150°	272.4	272.4	270.0	265.7	259.8	252.4	244.2	235.1	226.1	216.3	207.3
152.5°	260.6	260.6	259.4	255.5	251.2	245.3	238.3	230.8	223.0	214.4	206.1
155°	251.2	250.8	250.0	246.9	243.4	238.7	232.8	226.5	219.9	212.0	205.4
157.5°	242.2	242.2	241.4	239.1	235.9	232.0	227.3	221.8	216.3	210.1	204.2
160°	233.6	234.0	234.0	231.6	228.9	226.1	222.2	217.9	212.8	207.7	203.4
162.5°	225.7	226.1	226.1	224.2	222.6	220.2	216.7	213.2	209.3	205.4	201.8
165°	219.1	219.1	219.5	217.9	216.3	214.4	211.6	209.3	206.1	203.0	200.3
167.5°	212.4	212.4	212.8	211.6	210.8	209.3	207.7	205.7	203.0	200.7	198.7
170°	206.5	206.5	206.9	206.1	205.7	205.0	203.4	202.2	200.3	198.3	197.1
172.5°	201.0	201.4	202.2	201.4	201.4	201.0	199.9	199.1	197.5	196.3	195.9
175°	197.1	197.5	197.9	197.5	197.5	197.5	196.7	196.3	195.6	194.8	194.8
177.5°	194.4	194.4	195.2	194.8	195.2	195.2	194.8	194.4	194.0	193.6	194.0
180°	193.6	193.6	193.6	193.6	193.6	193.6	193.6	193.6	193.6	193.6	193.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	2025.4	2025.4	2025.4	2025.4	2025.4	2025.4	2025.4	2025.4	2025.4	2025.4	2025.4
2.5°	2150.4	2148.3	2128.4	2108.5	2089.0	2069.5	2054.9	2040.4	2015.9	1991.4	1976.0
5°	2283.7	2267.9	2236.4	2204.8	2157.5	2110.1	2070.3	2030.4	1979.8	1929.1	1886.8
7.5°	2358.0	2345.2	2307.0	2268.8	2206.1	2143.4	2081.1	2018.8	1944.1	1869.3	1805.4
10°	2360.1	2370.9	2339.3	2307.8	2237.2	2166.6	2081.9	1997.2	1896.7	1796.2	1713.6
12.5°	2286.2	2332.7	2326.1	2319.4	2247.6	2175.7	2072.8	1969.8	1846.5	1723.2	1619.8
15°	2147.9	2238.0	2264.6	2291.2	2231.8	2172.4	2055.3	1938.2	1793.3	1648.4	1529.7
17.5°	1969.8	2096.0	2166.2	2236.4	2193.2	2150.0	2021.7	1893.4	1730.2	1567.0	1437.9
20°	1758.9	1924.1	2034.2	2144.2	2128.4	2112.6	1980.2	1847.7	1671.7	1495.6	1355.7
22.5°	1550.4	1724.8	1876.8	2028.8	2045.0	2061.1	1927.4	1793.7	1601.1	1408.4	1266.0
25°	1370.6	1547.9	1729.0	1910.0	1946.5	1983.1	1856.0	1729.0	1529.3	1329.5	1187.9
27.5°	1199.2	1367.7	1567.0	1766.3	1832.8	1899.2	1783.0	1666.7	1458.7	1250.6	1109.5
30°	1059.2	1209.9	1413.4	1616.9	1709.5	1802.1	1695.3	1588.6	1382.3	1175.9	1037.6
32.5°	928.8	1063.8	1268.1	1472.4	1579.9	1687.5	1595.3	1503.1	1304.6	1106.1	969.5
35°	825.9	946.7	1137.3	1327.9	1448.3	1568.7	1493.1	1417.6	1223.7	1029.7	900.6
37.5°	737.4	838.7	1017.7	1196.7	1324.5	1452.4	1389.3	1326.2	1143.9	961.6	839.6
40°	664.4	745.7	912.2	1078.7	1204.1	1329.5	1275.6	1221.6	1058.4	895.2	781.0
42.5°	601.7	671.8	821.3	970.8	1085.8	1200.8	1165.1	1129.4	981.6	833.8	727.9
45°	546.4	605.4	737.0	868.6	974.5	1080.4	1052.2	1023.9	896.5	769.0	671.8
47.5°	497.4	548.1	665.6	783.1	878.2	973.3	947.1	921.0	815.5	710.0	621.6
50°	452.6	495.8	593.8	691.8	777.3	862.8	841.2	819.6	732.4	645.3	568.9
52.5°	410.2	445.9	534.0	622.0	690.9	759.9	743.2	726.6	659.4	592.1	522.8
55°	370.0	402.8	477.1	551.4	610.4	669.3	652.7	636.1	583.8	531.5	470.4
57.5°	333.4	362.1	422.3	482.5	529.4	576.3	568.4	560.5	516.9	473.3	423.1
60°	294.8	320.5	372.5	424.4	462.1	499.9	490.8	481.7	450.5	419.4	376.2
62.5°	260.3	283.2	324.7	366.2	396.9	427.7	421.0	414.4	390.7	367.1	331.3
65°	224.2	246.6	280.3	313.9	338.0	362.1	356.3	350.4	332.6	314.7	286.1
67.5°	191.4	210.1	239.2	268.2	284.4	300.6	297.3	294.0	280.3	266.6	244.1
70°	158.2	174.4	198.5	222.6	233.8	245.0	246.2	247.5	235.0	222.6	205.9
72.5°	125.0	137.9	160.3	182.7	191.4	200.1	199.7	199.3	191.8	184.4	169.4
75°	95.9	105.5	122.9	140.3	147.8	155.3	157.0	158.6	151.6	144.5	136.2
77.5°	68.9	75.6	88.9	102.1	110.4	118.8	119.6	120.4	117.1	113.8	105.9
80°	48.6	50.7	59.0	67.3	76.0	84.7	86.0	87.2	83.9	80.6	75.6
82.5°	33.6	34.9	37.8	40.7	47.8	54.8	56.5	58.1	56.5	54.8	49.4
85°	20.3	20.8	22.0	23.3	26.6	29.9	31.6	33.2	32.4	31.6	28.7
87.5°	9.1	9.1	9.6	10.0	10.8	11.6	13.7	15.8	14.5	13.3	12.0
90°	7.4	6.3	5.1	4.3	3.5	2.4	1.6	0.8	1.6	2.4	3.5
92.5°	60.4	39.6	27.0	20.0	16.1	12.5	8.6	5.9	8.6	12.5	16.1
95°	142.7	84.3	50.9	35.7	25.5	18.8	14.5	13.3	14.5	18.8	25.5
97.5°	158.7	90.9	58.0	41.1	31.0	25.1	21.6	21.2	21.6	25.1	31.0
100°	147.7	89.7	62.3	47.0	37.6	32.1	29.4	29.0	29.4	32.1	37.6
102.5°	138.3	91.3	67.4	53.7	45.5	40.4	38.0	37.2	38.0	40.4	45.5
105°	134.8	94.4	73.3	61.1	53.7	49.0	46.6	45.5	46.6	49.0	53.7
107.5°	134.0	99.5	80.7	69.4	62.3	57.6	55.3	54.1	55.3	57.6	62.3
110°	136.0	106.2	88.6	77.6	70.9	66.6	64.7	63.5	64.7	66.6	70.9



TEST NUMBER: P832235

CATALOG NUMBER: S123RDIP-S560D365U850-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	139.9	112.9	96.8	86.2	79.6	75.2	73.3	72.1	73.3	75.2	79.6
115°	144.2	120.3	105.4	94.8	88.2	84.3	81.9	80.3	81.9	84.3	88.2
117.5°	149.7	128.2	113.3	103.5	96.0	92.5	90.5	88.6	90.5	92.5	96.0
120°	156.0	135.6	121.5	111.7	104.2	100.3	98.4	97.2	98.4	100.3	104.2
122.5°	161.9	143.4	129.7	119.1	112.1	107.8	105.8	104.6	105.8	107.8	112.1
125°	168.1	150.9	137.2	126.6	119.1	114.8	112.5	111.7	112.5	114.8	119.1
127.5°	173.2	157.5	144.2	133.6	125.4	121.1	118.4	117.2	118.4	121.1	125.4
130°	178.3	163.4	150.5	139.9	131.7	127.0	123.4	122.3	123.4	127.0	131.7
132.5°	183.0	168.5	156.0	145.8	137.6	131.7	127.8	126.2	127.8	131.7	137.6
135°	186.9	173.6	161.5	150.9	142.7	136.8	132.5	130.9	132.5	136.8	142.7
137.5°	190.1	177.1	165.4	155.6	147.4	141.1	136.8	135.2	136.8	141.1	147.4
140°	192.4	180.7	169.3	159.5	151.7	145.4	141.5	139.5	141.5	145.4	151.7
142.5°	194.8	183.4	172.4	163.4	155.6	150.1	145.8	144.2	145.8	150.1	155.6
145°	196.3	185.8	175.6	166.6	159.9	154.0	150.5	149.3	150.5	154.0	159.9
147.5°	197.5	187.7	178.3	170.5	163.8	158.7	155.2	154.4	155.2	158.7	163.8
150°	197.9	189.7	180.7	173.6	168.1	163.0	159.9	159.5	159.9	163.0	168.1
152.5°	198.7	190.9	183.4	176.7	172.0	167.7	164.6	164.6	164.6	167.7	172.0
155°	198.7	192.4	185.8	180.3	176.0	172.0	169.7	169.7	169.7	172.0	176.0
157.5°	199.1	193.2	187.7	183.4	179.5	176.0	174.0	173.6	174.0	176.0	179.5
160°	199.1	194.4	189.7	185.8	183.0	179.9	178.3	178.3	178.3	179.9	183.0
162.5°	198.7	194.8	190.9	187.7	185.4	183.0	181.8	181.8	181.8	183.0	185.4
165°	197.9	195.2	192.0	189.3	187.7	185.8	185.0	185.4	185.0	185.8	187.7
167.5°	197.5	195.2	192.8	190.9	189.7	188.1	187.7	188.1	187.7	188.1	189.7
170°	196.3	194.8	192.8	192.0	191.2	190.1	189.7	190.5	189.7	190.1	191.2
172.5°	195.9	194.8	193.2	192.8	192.4	191.6	191.6	192.0	191.6	191.6	192.4
175°	195.2	194.4	193.6	193.2	193.2	192.4	192.8	193.2	192.8	192.4	193.2
177.5°	194.8	194.0	193.6	193.6	193.6	193.2	193.6	194.0	193.6	193.2	193.6
180°	193.6	193.6	193.6	193.6	193.6	193.6	193.6	193.6	193.6	193.6	193.6



TEST NUMBER: P832235

CATALOG NUMBER: S123RDIP-S560D365U850-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	2025.4	2025.4	2025.4	2025.4	2025.4	2025.4	2025.4	2025.4	2025.4	2025.4	2025.4
2.5°	1960.7	1937.0	1913.3	1896.3	1879.3	1858.1	1836.9	1836.1	1835.3	1819.5	1803.7
5°	1844.4	1803.3	1762.2	1721.9	1681.6	1641.4	1601.1	1592.0	1582.8	1569.1	1555.4
7.5°	1741.4	1675.8	1610.2	1558.7	1507.2	1467.0	1426.7	1399.3	1371.9	1350.7	1329.5
10°	1631.0	1549.6	1468.2	1405.9	1343.6	1300.1	1256.5	1224.9	1193.3	1178.4	1163.4
12.5°	1516.4	1427.9	1339.5	1278.5	1217.4	1165.1	1112.8	1084.1	1055.5	1034.7	1014.0
15°	1410.9	1315.8	1220.7	1156.0	1091.2	1042.2	993.2	964.6	935.9	915.1	894.4
17.5°	1308.8	1212.9	1116.9	1051.3	985.7	941.3	896.9	869.1	841.2	828.4	815.5
20°	1215.8	1119.0	1022.3	960.4	898.5	854.9	811.3	796.4	781.4	769.4	757.4
22.5°	1123.6	1030.6	937.6	878.2	818.8	787.3	755.7	743.7	731.6	722.5	713.3
25°	1046.4	953.8	861.2	809.3	757.4	732.9	708.4	700.5	692.6	683.5	674.3
27.5°	968.3	880.3	792.2	750.7	709.2	689.3	669.3	659.4	649.4	641.9	634.5
30°	899.4	818.0	736.6	702.1	667.7	650.2	632.8	622.0	611.2	604.1	597.1
32.5°	832.9	760.7	688.4	659.0	629.5	612.4	595.4	585.0	574.7	566.4	558.1
35°	771.5	708.8	646.1	619.1	592.1	575.1	558.1	547.7	537.3	529.0	520.7
37.5°	717.5	660.6	603.7	578.4	553.1	538.1	523.2	512.4	501.6	492.9	484.1
40°	666.8	616.6	566.4	541.9	517.4	501.2	485.0	475.4	465.9	458.0	450.1
42.5°	622.0	575.9	529.8	505.7	481.7	466.3	450.9	439.7	428.5	423.9	419.4
45°	574.7	534.0	493.3	470.0	446.8	430.6	414.4	404.8	395.3	391.1	387.0
47.5°	533.1	495.4	457.6	434.7	411.9	397.4	382.8	375.4	367.9	362.1	356.3
50°	492.5	455.9	419.4	397.4	375.4	362.9	350.4	341.3	332.2	328.0	323.9
52.5°	453.4	420.2	387.0	364.6	342.1	330.1	318.1	310.2	302.3	293.6	284.8
55°	409.4	380.3	351.3	331.3	311.4	299.0	286.5	277.4	268.2	259.1	250.0
57.5°	372.9	344.2	315.6	297.7	279.9	267.8	255.8	245.8	235.8	228.4	220.9
60°	333.0	308.1	283.2	265.7	248.3	236.7	225.0	215.5	205.9	202.2	198.5
62.5°	295.6	272.4	249.1	233.8	218.4	207.2	196.0	189.8	183.5	181.0	178.5
65°	257.4	237.5	217.6	203.5	189.3	179.8	170.2	167.3	164.4	162.4	160.3
67.5°	221.7	204.7	187.7	175.2	162.8	156.1	149.5	146.2	142.8	140.3	137.9
70°	189.3	174.4	159.4	148.6	137.9	131.6	125.4	122.5	119.6	115.0	110.4
72.5°	154.5	142.8	131.2	122.9	114.6	109.2	103.8	98.0	92.2	88.0	83.9
75°	127.9	116.3	104.6	96.7	88.9	82.6	76.4	74.3	72.2	71.0	69.8
77.5°	98.0	88.0	78.1	71.8	65.6	62.7	59.8	58.5	57.3	56.9	56.5
80°	70.6	62.3	54.0	50.7	47.3	46.5	45.7	44.8	44.0	43.6	43.2
82.5°	44.0	39.9	35.7	34.9	34.0	33.6	33.2	32.8	32.4	32.0	31.6
85°	25.7	24.1	22.4	22.0	21.6	21.2	20.8	20.8	20.8	20.8	20.8
87.5°	10.8	10.8	10.8	10.8	10.8	10.8	10.8	10.8	10.8	10.4	10.0
90°	4.3	5.1	6.3	7.4	8.6	9.8	9.4	9.8	10.2	10.6	11.4
92.5°	20.0	27.0	39.6	60.4	80.7	72.9	54.5	38.8	30.2	26.3	23.5
95°	35.7	50.9	84.3	142.7	206.9	232.4	188.5	141.1	95.6	74.9	60.7
97.5°	41.1	58.0	90.9	158.7	266.9	357.4	369.6	324.1	244.5	192.8	148.1
100°	47.0	62.3	89.7	147.7	250.8	371.1	448.3	462.0	430.3	384.5	328.8
102.5°	53.7	67.4	91.3	138.3	227.3	345.7	452.3	507.9	514.6	492.6	462.4
105°	61.1	73.3	94.4	134.8	208.9	315.1	427.6	509.5	548.7	556.1	545.9
107.5°	69.4	80.7	99.5	134.0	195.6	288.0	392.3	486.0	547.5	578.1	588.6
110°	77.6	88.6	106.2	136.0	188.5	265.7	359.4	449.1	521.2	570.6	598.0



TEST NUMBER: P832235

CATALOG NUMBER: S123RDIP-S560D365U850-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	86.2	96.8	112.9	139.9	184.6	250.8	330.8	412.7	486.7	543.6	580.8
115°	94.8	105.4	120.3	144.2	184.2	241.0	308.8	381.3	449.5	507.1	549.8
117.5°	103.5	113.3	128.2	149.7	184.6	234.4	294.3	357.0	417.4	470.3	514.6
120°	111.7	121.5	135.6	156.0	186.2	230.0	283.3	338.6	391.5	438.5	478.1
122.5°	119.1	129.7	143.4	161.9	188.9	227.3	274.3	324.1	370.7	413.5	449.5
125°	126.6	137.2	150.9	168.1	191.6	225.0	266.9	311.6	354.3	391.9	423.3
127.5°	133.6	144.2	157.5	173.2	194.8	223.8	259.8	300.2	339.0	373.5	402.5
130°	139.9	150.5	163.4	178.3	197.9	222.6	254.3	289.6	324.9	356.6	383.3
132.5°	145.8	156.0	168.5	183.0	200.3	222.2	249.2	279.8	311.6	340.6	365.6
135°	150.9	161.5	173.6	186.9	202.6	221.8	244.9	271.2	299.0	324.5	346.8
137.5°	155.6	165.4	177.1	190.1	204.2	221.0	241.0	263.0	286.5	309.2	329.2
140°	159.5	169.3	180.7	192.4	205.7	220.6	237.5	255.9	275.9	294.7	311.6
142.5°	163.4	172.4	183.4	194.8	206.9	219.9	234.4	249.2	265.7	281.4	295.5
145°	166.6	175.6	185.8	196.3	207.3	219.1	231.6	244.2	257.1	269.6	281.0
147.5°	170.5	178.3	187.7	197.5	207.3	217.9	228.9	239.8	250.4	261.0	269.2
150°	173.6	180.7	189.7	197.9	207.3	216.3	226.1	235.1	244.2	252.4	259.8
152.5°	176.7	183.4	190.9	198.7	206.1	214.4	223.0	230.8	238.3	245.3	251.2
155°	180.3	185.8	192.4	198.7	205.4	212.0	219.9	226.5	232.8	238.7	243.4
157.5°	183.4	187.7	193.2	199.1	204.2	210.1	216.3	221.8	227.3	232.0	235.9
160°	185.8	189.7	194.4	199.1	203.4	207.7	212.8	217.9	222.2	226.1	228.9
162.5°	187.7	190.9	194.8	198.7	201.8	205.4	209.3	213.2	216.7	220.2	222.6
165°	189.3	192.0	195.2	197.9	200.3	203.0	206.1	209.3	211.6	214.4	216.3
167.5°	190.9	192.8	195.2	197.5	198.7	200.7	203.0	205.7	207.7	209.3	210.8
170°	192.0	192.8	194.8	196.3	197.1	198.3	200.3	202.2	203.4	205.0	205.7
172.5°	192.8	193.2	194.8	195.9	195.9	196.3	197.5	199.1	199.9	201.0	201.4
175°	193.2	193.6	194.4	195.2	194.8	194.8	195.6	196.3	196.7	197.5	197.5
177.5°	193.6	193.6	194.0	194.8	194.0	193.6	194.0	194.4	194.8	195.2	195.2
180°	193.6	193.6	193.6	193.6	193.6	193.6	193.6	193.6	193.6	193.6	193.6



TEST NUMBER: P832235

CATALOG NUMBER: S123RDIP-S560D365U850-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	2025.4	2025.4	2025.4	2025.4
2.5°	1799.6	1795.4	1793.7	1792.1
5°	1542.5	1529.7	1526.8	1523.9
7.5°	1324.1	1318.7	1300.9	1283.0
10°	1146.8	1130.2	1122.8	1115.3
12.5°	998.6	983.2	980.7	978.3
15°	883.6	872.8	869.1	865.3
17.5°	808.0	800.5	796.0	791.4
20°	752.0	746.6	743.2	739.9
22.5°	709.2	705.0	702.6	700.1
25°	668.1	661.9	659.8	657.7
27.5°	629.1	623.7	621.6	619.5
30°	592.5	588.0	585.0	582.1
32.5°	552.7	547.3	545.6	543.9
35°	517.4	514.0	512.4	510.7
37.5°	480.0	475.8	473.3	470.9
40°	448.0	445.9	444.7	443.5
42.5°	415.6	411.9	411.5	411.1
45°	383.2	379.5	378.7	377.8
47.5°	352.9	349.6	349.2	348.8
50°	319.3	314.7	311.4	308.1
52.5°	280.7	276.5	273.6	270.7
55°	245.4	240.8	238.3	235.8
57.5°	218.8	216.7	215.5	214.3
60°	197.2	196.0	195.2	194.3
62.5°	177.3	176.1	176.1	176.1
65°	159.0	157.8	156.5	155.3
67.5°	135.4	132.9	132.5	132.0
70°	106.7	103.0	102.6	102.1
72.5°	83.5	83.0	82.2	81.4
75°	68.9	68.1	68.1	68.1
77.5°	55.6	54.8	54.8	54.8
80°	42.8	42.4	42.8	43.2
82.5°	31.6	31.6	31.1	30.7
85°	20.3	19.9	19.9	19.9
87.5°	10.0	10.0	10.0	10.0
90°	11.0	11.4	11.8	11.4
92.5°	22.7	21.2	21.6	20.8
95°	53.3	49.8	47.0	45.5
97.5°	121.9	107.0	97.6	93.3
100°	289.2	260.6	245.3	245.7
102.5°	433.8	412.7	400.5	389.2
105°	527.9	513.0	500.5	498.5
107.5°	586.3	579.2	574.1	569.8
110°	609.0	612.1	611.4	610.6



TEST NUMBER: P832235

CATALOG NUMBER: S123RDIP-S560D365U850-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
112.5°	603.1	614.5	618.4	618.8
115°	579.2	596.5	604.3	606.3
117.5°	545.1	564.3	576.1	578.8
120°	509.1	531.0	540.4	542.8
122.5°	476.2	495.4	505.9	509.1
125°	448.3	465.6	475.4	478.1
127.5°	425.2	440.1	449.1	451.5
130°	404.0	418.2	426.4	429.5
132.5°	384.8	399.0	406.0	408.0
135°	366.0	377.8	384.8	387.6
137.5°	345.7	357.8	363.7	366.0
140°	326.5	337.4	343.7	343.3
142.5°	307.6	317.0	322.5	322.1
145°	290.8	299.0	302.2	302.9
147.5°	277.1	283.0	286.1	286.5
150°	265.7	270.0	272.4	272.4
152.5°	255.5	259.4	260.6	260.6
155°	246.9	250.0	250.8	251.2
157.5°	239.1	241.4	242.2	242.2
160°	231.6	234.0	234.0	233.6
162.5°	224.2	226.1	226.1	225.7
165°	217.9	219.5	219.1	219.1
167.5°	211.6	212.8	212.4	212.4
170°	206.1	206.9	206.5	206.5
172.5°	201.4	202.2	201.4	201.0
175°	197.5	197.9	197.5	197.1
177.5°	194.8	195.2	194.4	194.4
180°	193.6	193.6	193.6	193.6



TEST NUMBER: P832235

CATALOG NUMBER: S123RDIP-S560D365U850-4F0-1E-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	12.75	13.69	13.58	14.53	15.58	17.41	18.35	18.25	19.19	20.24
	3H	13.98	14.81	14.82	15.67	16.74	18.92	19.76	19.77	20.61	21.69
	4H	14.37	15.15	15.23	16.01	17.10	19.42	20.20	20.28	21.06	22.15
	6H	14.65	15.38	15.52	16.25	17.34	19.73	20.46	20.60	21.33	22.42
	8H	14.74	15.43	15.62	16.32	17.42	19.81	20.50	20.70	21.39	22.49
	12H	14.80	15.45	15.68	16.33	17.46	19.85	20.51	20.74	21.38	22.51
4H	2H	13.49	14.27	14.35	15.13	16.22	17.42	18.21	18.29	19.07	20.16
	3H	14.86	15.52	15.74	16.41	17.51	19.09	19.74	19.96	20.64	21.74
	4H	15.32	15.92	16.21	16.81	17.94	19.70	20.29	20.59	21.18	22.31
	6H	15.70	16.21	16.60	17.12	18.25	20.14	20.65	21.05	21.57	22.70
	8H	15.82	16.30	16.73	17.21	18.35	20.28	20.75	21.18	21.66	22.80
	12H	15.90	16.33	16.83	17.26	18.41	20.34	20.77	21.27	21.70	22.85
8H	4H	15.64	16.12	16.55	17.03	18.17	19.67	20.15	20.58	21.06	22.20
	6H	16.11	16.51	17.04	17.46	18.60	20.17	20.57	21.10	21.52	22.66
	8H	16.31	16.65	17.25	17.60	18.76	20.36	20.71	21.30	21.65	22.81
	12H	16.45	16.76	17.39	17.69	18.90	20.48	20.79	21.42	21.72	22.93
12H	4H	15.66	16.09	16.58	17.02	18.16	19.63	20.06	20.55	20.98	22.13
	6H	16.17	16.52	17.11	17.46	18.62	20.15	20.50	21.09	21.44	22.60
	8H	16.39	16.70	17.34	17.63	18.85	20.35	20.65	21.29	21.59	22.80