

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: P831059

Luminaire Tested: S123DIP-S1000D1025U927-4F0-1E-UDD-G4

Issue Date: 05/03/2024

Test Information

Test Method: LM-79-2019
Report Number: P831059
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2301-905-1, G3-1807-864-17)
Test Lab: INNOVATION CENTER
Issue Date: 05/03/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123DIP-S1000D1025U927-4F0-1E-UDD-G4
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT, GRAZE OPTIC
UPLIGHT 1025 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: -

Summary

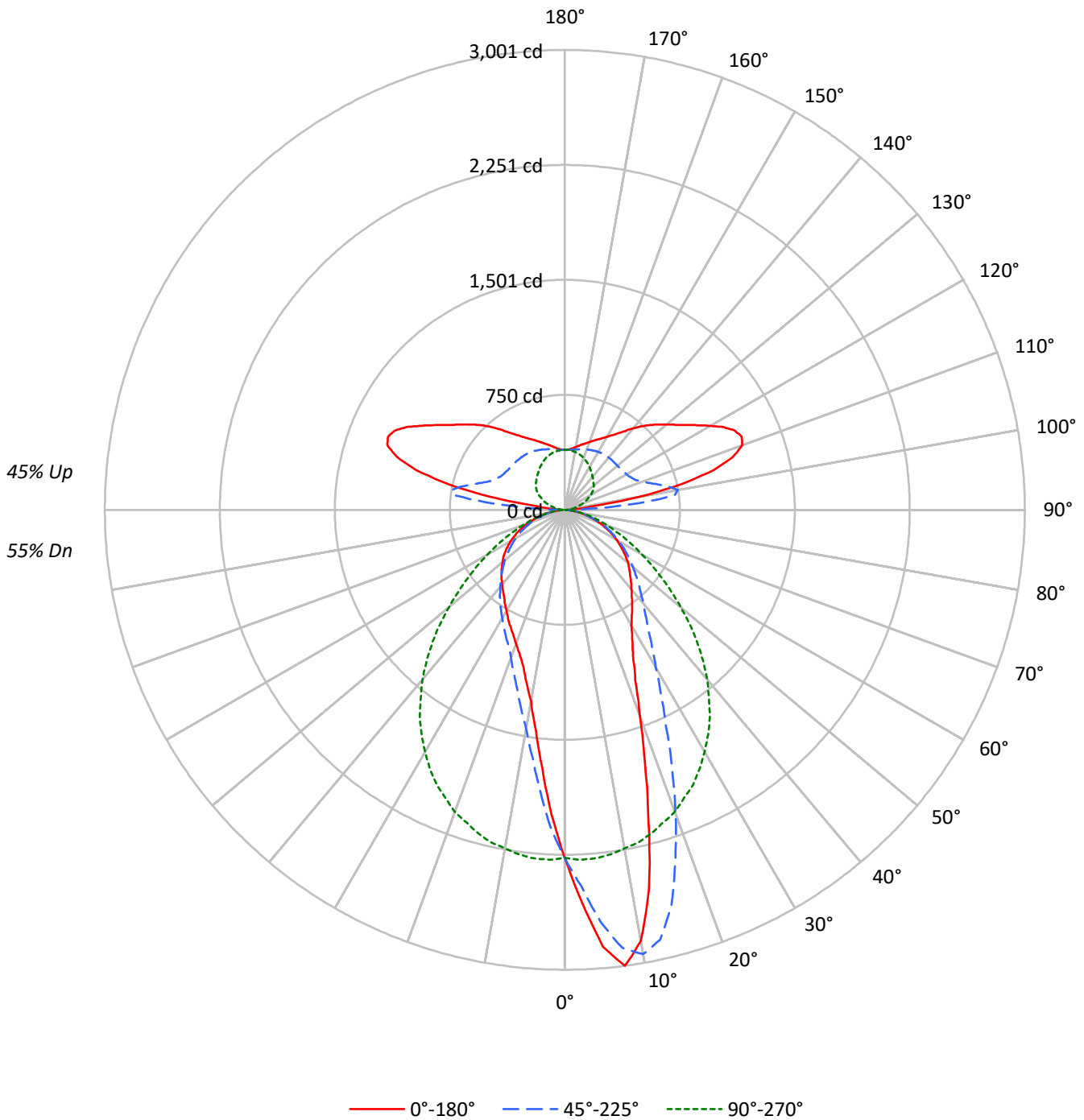
Lumens per Lamp: N/A
Luminaire Lumens: 6592.6 lumens
Efficiency: N/A
Efficacy: 108.1 lumens/watt
Spacing Criteria (0/90/45): 0.65 / 1.19 / 0.89
Luminous Opening: Rectangular (W 4' x L: 0.25' x H: 0')
CIE Type: General Diffuse

Input Watts (W): 61
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	108	108	108	108	101	101	101	101	86	86	86	73	73	73	61	61	61	55				
1	100	95	92	88	92	89	86	83	77	74	72	65	64	62	55	54	53	48				
2	91	84	78	73	85	78	73	69	68	64	61	58	55	53	49	47	45	41				
3	84	75	67	62	78	70	63	58	60	56	52	52	48	46	44	42	39	36				
4	77	66	59	53	71	62	56	50	54	49	45	47	43	40	40	37	35	31				
5	71	60	52	46	66	56	49	44	49	44	39	42	38	35	36	33	31	28				
6	66	54	46	40	61	51	44	39	45	39	35	39	34	31	33	30	28	25				
7	61	49	41	36	57	46	39	34	41	35	31	36	31	28	31	27	25	22				
8	57	45	37	32	53	42	36	31	37	32	28	33	29	25	29	25	23	20				
9	53	41	34	29	50	39	32	28	35	29	25	30	26	23	27	23	21	19				
10	50	38	31	26	47	36	30	25	32	27	23	28	24	21	25	22	19	17				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	24455	24455	24455	24455	24455
5°	30927	29190	24673	19883	18271
10°	31227	32172	24509	15850	13850
15°	23520	29869	24342	13422	11713
20°	16387	24171	24032	11738	10639
25°	12495	18587	23502	10799	9979
30°	10811	14767	22656	10136	9447
35°	10030	12468	21680	9656	9073
40°	9496	11185	20310	9199	8948
45°	9179	10351	18568	8843	8891
50°	9021	9692	16506	8519	8845
55°	8685	9211	14482	8210	8884
60°	8374	8693	12482	7920	8738
65°	7868	8204	10769	7613	8565
70°	7267	7582	9158	7100	8063
75°	6575	6796	7848	6600	7365
80°	5424	5945	6211	5752	6211
85°	4298	4817	4557	4878	4952

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 80°
 Vertical Angle: 45°
 Luminance: 21200 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	214.8	3.3
10°-20°	534.3	8.1
20°-30°	632.7	9.6
30°-40°	636.1	9.6
40°-50°	583.6	8.9
50°-60°	481.7	7.3
60°-70°	340.8	5.2
70°-80°	181.9	2.8
80°-90°	48.3	0.7
90°-100°	212.0	3.2
100°-110°	620.6	9.4
110°-120°	606.0	9.2
120°-130°	482.6	7.3
130°-140°	380.8	5.8
140°-150°	284.1	4.3
150°-160°	198.1	3.0
160°-170°	116.4	1.8
170°-180°	37.8	0.6
0°-30°	1381.8	21.0
0°-40°	2018.0	30.6
0°-60°	3083.3	46.8
0°-90°	3654.3	55.4
90°-120°	1438.6	21.8
90°-150°	2586.1	39.2
90°-180°	2938.0	44.6
0°-180°	6592.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2272	2272	2272	2272	2272	
5°	2862	2702	2284	1840	1691	273
15°	2111	2680	2184	1204	1051	583
25°	1052	1565	1979	909	840	497
35°	763	949	1650	735	690	480
45°	603	680	1220	581	584	467
55°	463	491	772	438	473	414
65°	309	322	423	299	336	307
75°	158	163	189	159	177	166
85°	35	39	37	40	40	39
90°	23	20	2	20	23	14
95°	92	469	27	469	92	149
105°	1006	636	92	636	1006	1003
115°	1223	486	162	486	1223	1193
125°	965	454	225	454	965	873
135°	782	448	264	448	782	607
145°	611	442	301	442	611	388
155°	507	428	342	428	507	236
165°	442	410	374	410	442	126
175°	398	393	390	393	398	39
180°	391	391	391	391	391	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	2271.9	2271.9	2271.9	2271.9	2271.9	2271.9	2271.9	2271.9	2271.9	2271.9	2271.9
2.5°	2560.8	2558.1	2555.5	2542.3	2529.1	2522.8	2516.5	2497.5	2478.5	2457.5	2436.4
5°	2862.3	2869.7	2877.0	2868.6	2860.2	2834.3	2808.5	2774.3	2740.0	2701.5	2663.0
7.5°	3001.4	3005.7	3009.9	3004.6	2999.3	2992.5	2985.6	2955.1	2924.5	2885.0	2845.4
10°	2857.0	2866.5	2876.0	2896.5	2917.1	2940.3	2963.5	2959.3	2955.1	2943.5	2931.9
12.5°	2539.7	2551.3	2562.9	2604.0	2645.1	2697.8	2750.5	2795.9	2841.2	2872.8	2904.5
15°	2110.6	2142.8	2174.9	2212.3	2249.8	2327.3	2404.7	2500.2	2595.6	2680.4	2765.3
17.5°	1738.5	1750.6	1762.7	1802.8	1842.8	1940.3	2037.9	2148.0	2258.2	2398.9	2539.7
20°	1430.6	1441.7	1452.8	1505.5	1558.2	1634.6	1711.0	1834.9	1958.8	2110.1	2261.4
22.5°	1201.8	1219.2	1236.6	1266.2	1295.7	1368.9	1442.2	1552.4	1662.5	1829.6	1996.7
25°	1052.1	1064.8	1077.4	1095.4	1113.3	1171.8	1230.3	1321.0	1411.6	1565.0	1718.4
27.5°	949.9	955.1	960.4	978.3	996.3	1034.2	1072.2	1150.2	1228.2	1358.4	1488.6
30°	869.8	873.4	877.1	892.9	908.8	934.6	960.4	1016.8	1073.2	1188.1	1303.1
32.5°	813.9	816.5	819.2	831.3	843.4	861.8	880.3	921.4	962.5	1057.4	1152.3
35°	763.3	764.9	766.4	775.4	784.4	798.1	811.8	842.9	874.0	948.8	1023.7
37.5°	719.0	721.1	723.2	728.5	733.8	745.9	758.0	782.8	807.6	865.0	922.5
40°	675.8	679.5	683.2	686.8	690.5	700.5	710.6	729.5	748.5	796.0	843.4
42.5°	638.9	642.6	646.3	647.8	649.4	655.2	661.0	678.4	695.8	731.1	766.4
45°	603.0	604.6	606.2	607.8	609.4	614.1	618.8	634.1	649.4	680.0	710.6
47.5°	570.3	570.3	570.3	571.4	572.5	576.7	580.9	592.0	603.0	626.8	650.5
50°	538.7	538.7	538.7	537.1	535.6	538.2	540.8	549.3	557.7	578.8	599.9
52.5°	500.8	500.8	500.8	501.3	501.8	501.8	501.8	509.2	516.6	535.6	554.5
55°	462.8	464.9	467.0	465.5	463.9	464.9	466.0	470.7	475.5	490.8	506.0
57.5°	424.9	425.9	427.0	426.4	425.9	426.4	427.0	431.2	435.4	447.0	458.6
60°	389.0	389.0	389.0	388.0	386.9	388.0	389.0	391.1	393.2	403.8	414.3
62.5°	349.0	349.5	350.0	350.5	351.1	350.0	349.0	351.6	354.2	362.1	370.0
65°	308.9	309.4	309.9	311.5	313.1	312.1	311.0	313.6	316.3	322.1	327.9
67.5°	273.1	272.0	270.9	271.5	272.0	273.6	275.2	275.7	276.2	282.5	288.9
70°	230.9	231.9	233.0	232.5	231.9	232.5	233.0	234.6	236.2	240.9	245.6
72.5°	192.9	193.5	194.0	194.0	194.0	195.0	196.1	197.7	199.3	201.9	204.5
75°	158.1	158.1	158.1	159.2	160.2	160.8	161.3	161.3	161.3	163.4	165.5
77.5°	120.2	122.8	125.5	124.9	124.4	125.5	126.5	128.1	129.7	130.7	131.8
80°	87.5	87.5	87.5	88.0	88.6	90.1	91.7	92.8	93.8	95.9	98.0
82.5°	55.9	56.4	56.9	58.5	60.1	61.1	62.2	63.8	65.4	65.4	65.4
85°	34.8	33.7	32.7	33.7	34.8	35.8	36.9	37.4	38.0	39.0	40.1
87.5°	16.9	16.9	16.9	16.9	16.9	17.4	17.9	17.9	17.9	17.9	17.9
90°	22.9	23.7	22.9	22.1	22.9	21.3	20.6	19.8	19.0	19.8	17.4
92.5°	41.9	43.5	42.7	45.9	47.4	53.0	60.9	78.3	109.9	147.1	162.9
95°	91.7	94.9	100.4	107.5	122.6	151.0	192.9	284.7	380.3	468.9	417.5
97.5°	188.2	196.9	215.9	245.9	298.9	389.0	493.4	653.9	745.7	721.2	538.5
100°	495.8	495.0	525.8	583.6	663.4	775.7	868.2	932.3	904.6	748.8	506.1
102.5°	785.2	808.1	832.6	875.3	933.1	994.0	1038.2	1024.8	912.5	697.4	458.6
105°	1005.8	1009.8	1035.1	1065.1	1101.5	1122.1	1107.0	1028.0	862.7	635.8	421.5
107.5°	1149.7	1158.4	1168.7	1182.9	1187.7	1166.3	1104.7	980.5	791.5	581.2	394.6
110°	1232.0	1233.6	1235.1	1228.8	1206.7	1151.3	1051.7	906.2	725.1	536.1	380.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	1248.6	1247.8	1239.9	1216.9	1171.9	1096.8	982.1	832.6	667.4	506.1	372.4
115°	1223.3	1219.3	1203.5	1168.7	1109.4	1023.2	907.0	769.4	623.1	486.3	371.6
117.5°	1167.9	1162.4	1138.7	1099.9	1038.2	948.9	842.1	720.4	593.8	472.9	372.4
120°	1095.2	1090.4	1071.5	1027.2	964.7	884.8	789.9	683.2	571.7	464.2	375.6
122.5°	1027.2	1020.8	999.5	960.7	907.0	834.2	748.0	653.9	553.5	458.6	381.1
125°	964.7	959.2	939.4	904.6	854.0	790.7	714.8	628.6	538.5	453.9	386.7
127.5°	910.9	906.2	888.0	858.0	812.1	753.6	684.0	605.7	524.3	451.5	393.0
130°	866.6	860.3	843.7	815.3	773.3	719.6	655.5	584.4	513.2	449.1	399.3
132.5°	823.2	819.2	805.0	776.5	737.8	687.2	628.6	564.6	502.9	448.3	404.1
135°	782.0	776.5	762.3	738.5	699.8	654.7	603.3	547.2	494.2	447.6	408.8
137.5°	738.5	733.8	721.9	697.4	664.2	623.9	578.0	530.6	486.3	446.0	412.0
140°	692.7	693.5	680.8	658.7	628.6	594.6	556.7	516.4	479.2	445.2	415.1
142.5°	650.0	650.8	639.7	620.7	596.2	567.8	536.1	502.9	472.9	443.6	417.5
145°	611.2	609.7	603.3	586.7	567.0	544.0	518.7	492.6	467.3	442.0	418.3
147.5°	578.0	577.2	570.9	559.1	543.2	526.6	505.3	483.9	461.8	439.7	418.3
150°	549.6	549.6	544.8	536.1	524.3	509.2	492.6	474.4	456.3	436.5	418.3
152.5°	525.8	525.8	523.5	515.6	506.9	495.0	480.8	465.7	449.9	432.5	415.9
155°	506.9	506.1	504.5	498.2	491.0	481.6	469.7	457.0	443.6	427.8	414.3
157.5°	488.7	488.7	487.1	482.4	476.0	468.1	458.6	447.6	436.5	423.8	412.0
160°	471.3	472.1	472.1	467.3	461.8	456.3	448.3	439.7	429.4	419.1	410.4
162.5°	455.5	456.3	456.3	452.3	449.1	444.4	437.3	430.2	422.3	414.3	407.2
165°	442.0	442.0	442.8	439.7	436.5	432.5	427.0	422.3	415.9	409.6	404.1
167.5°	428.6	428.6	429.4	427.0	425.4	422.3	419.1	415.1	409.6	404.9	400.9
170°	416.7	416.7	417.5	415.9	415.1	413.6	410.4	408.0	404.1	400.1	397.7
172.5°	405.6	406.4	408.0	406.4	406.4	405.6	403.3	401.7	398.5	396.2	395.4
175°	397.7	398.5	399.3	398.5	398.5	398.5	397.0	396.2	394.6	393.0	393.0
177.5°	392.2	392.2	393.8	393.0	393.8	393.8	393.0	392.2	391.4	390.6	391.4
180°	390.6	390.6	390.6	390.6	390.6	390.6	390.6	390.6	390.6	390.6	390.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	2271.9	2271.9	2271.9	2271.9	2271.9	2271.9	2271.9	2271.9	2271.9	2271.9	2271.9
2.5°	2430.0	2423.7	2400.5	2377.3	2351.0	2324.6	2305.1	2285.6	2256.6	2227.6	2203.9
5°	2633.5	2604.0	2555.0	2505.9	2439.5	2373.1	2328.3	2283.5	2223.4	2163.3	2115.3
7.5°	2794.8	2744.2	2675.7	2607.2	2520.2	2433.2	2351.0	2268.7	2177.0	2085.3	2010.5
10°	2897.6	2863.3	2784.3	2705.2	2588.7	2472.2	2357.3	2242.4	2124.3	2006.2	1907.1
12.5°	2907.6	2910.8	2838.0	2765.3	2633.5	2501.7	2362.0	2222.4	2073.7	1925.1	1809.6
15°	2819.6	2873.9	2833.8	2793.8	2660.9	2528.1	2356.2	2184.4	2013.1	1841.8	1708.4
17.5°	2656.2	2772.7	2778.5	2784.3	2651.4	2518.6	2328.3	2138.0	1944.0	1750.1	1609.8
20°	2433.2	2605.0	2664.1	2723.1	2615.1	2507.0	2302.5	2098.0	1880.8	1663.6	1516.5
22.5°	2205.5	2414.2	2522.3	2630.3	2550.2	2470.1	2252.4	2034.7	1805.4	1576.1	1426.9
25°	1946.1	2173.9	2339.9	2505.9	2456.9	2407.9	2193.4	1978.8	1734.8	1490.7	1338.4
27.5°	1720.0	1951.4	2151.7	2352.0	2341.5	2330.9	2118.0	1905.0	1655.2	1405.3	1258.2
30°	1518.6	1734.2	1958.3	2182.3	2208.1	2234.0	2028.4	1822.8	1572.4	1322.0	1180.2
32.5°	1340.5	1528.7	1769.0	2009.4	2060.0	2110.6	1925.1	1739.5	1491.8	1244.0	1107.5
35°	1194.5	1365.3	1605.6	1846.0	1909.2	1972.5	1811.2	1649.9	1408.5	1167.1	1036.9
37.5°	1065.3	1208.2	1442.7	1677.3	1754.8	1832.3	1687.9	1543.4	1317.3	1091.1	971.5
40°	958.3	1073.2	1288.8	1504.4	1594.0	1683.6	1564.5	1445.4	1230.8	1016.3	906.1
42.5°	868.7	971.0	1166.5	1362.1	1448.0	1533.9	1433.3	1332.6	1141.8	950.9	850.3
45°	792.3	874.0	1051.6	1229.3	1311.0	1392.7	1306.2	1219.8	1051.6	883.5	789.6
47.5°	720.6	790.7	942.5	1094.3	1167.1	1239.8	1172.3	1104.9	962.5	820.2	735.3
50°	656.3	712.7	845.5	978.3	1041.6	1104.9	1045.3	985.7	868.7	751.7	677.9
52.5°	600.4	646.3	757.5	868.7	923.0	977.3	926.2	875.0	782.3	689.5	625.2
55°	545.0	584.1	680.5	777.0	813.9	850.8	811.2	771.7	696.9	622.0	567.7
57.5°	493.4	528.2	607.2	686.3	714.8	743.2	707.4	671.6	615.2	558.8	513.4
60°	442.8	471.2	537.1	603.0	620.4	637.8	608.8	579.8	540.3	500.8	460.2
62.5°	395.9	421.7	470.7	519.7	531.3	542.9	520.8	498.7	468.6	438.6	406.9
65°	347.4	366.9	406.9	447.0	454.4	461.8	442.3	422.8	400.1	377.4	354.2
67.5°	302.6	316.3	349.0	381.6	382.2	382.7	366.9	351.1	338.4	325.8	307.3
70°	258.8	272.0	293.6	315.2	315.7	316.3	303.6	291.0	281.5	272.0	258.3
72.5°	214.0	223.5	239.8	256.2	255.1	254.1	246.2	238.3	230.9	223.5	213.5
75°	173.4	181.3	192.4	203.5	200.3	197.1	192.9	188.7	182.4	176.1	169.7
77.5°	136.5	141.3	147.6	153.9	151.8	149.7	146.0	142.3	137.6	132.8	130.2
80°	100.2	102.3	106.5	110.7	109.6	108.6	104.4	100.2	99.1	98.0	94.4
82.5°	68.0	70.6	71.7	72.7	72.2	71.7	68.5	65.4	64.3	63.3	62.7
85°	40.6	41.1	41.6	42.2	40.6	39.0	38.0	36.9	36.9	36.9	36.4
87.5°	18.4	19.0	19.0	19.0	18.4	17.9	16.9	15.8	16.3	16.9	16.9
90°	15.0	12.7	10.3	8.7	7.1	4.7	3.2	1.6	3.2	4.7	7.1
92.5°	121.8	79.9	54.6	40.3	32.4	25.3	17.4	11.9	17.4	25.3	32.4
95°	287.8	170.0	102.8	72.0	51.4	38.0	29.3	26.9	29.3	38.0	51.4
97.5°	320.2	183.5	117.0	83.0	62.5	50.6	43.5	42.7	43.5	50.6	62.5
100°	298.1	181.1	125.7	94.9	75.9	64.8	59.3	58.5	59.3	64.8	75.9
102.5°	279.1	184.2	136.0	108.3	91.7	81.4	76.7	75.1	76.7	81.4	91.7
105°	272.0	190.6	147.9	123.4	108.3	98.8	94.1	91.7	94.1	98.8	108.3
107.5°	270.4	200.8	162.9	140.0	125.7	116.2	111.5	109.1	111.5	116.2	125.7
110°	274.4	214.3	178.7	156.6	143.1	134.4	130.5	128.1	130.5	134.4	143.1



TEST NUMBER: P831059

CATALOG NUMBER: S123DIP-S1000D1025U927-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	282.3	227.7	195.3	174.0	160.5	151.8	147.9	145.5	147.9	151.8	160.5
115°	291.0	242.8	212.7	191.4	177.9	170.0	165.3	162.1	165.3	170.0	177.9
117.5°	302.1	258.6	228.5	208.8	193.7	186.6	182.7	178.7	182.7	186.6	193.7
120°	314.7	273.6	245.1	225.4	210.3	202.4	198.5	196.1	198.5	202.4	210.3
122.5°	326.6	289.4	261.7	240.4	226.2	217.5	213.5	211.1	213.5	217.5	226.2
125°	339.2	304.4	276.8	255.4	240.4	231.7	226.9	225.4	226.9	231.7	240.4
127.5°	349.5	317.9	291.0	269.6	253.0	244.3	238.8	236.4	238.8	244.3	253.0
130°	359.8	329.7	303.6	282.3	265.7	256.2	249.1	246.7	249.1	256.2	265.7
132.5°	369.3	340.0	314.7	294.2	277.5	265.7	257.8	254.6	257.8	265.7	277.5
135°	377.2	350.3	325.8	304.4	287.8	276.0	267.3	264.1	267.3	276.0	287.8
137.5°	383.5	357.4	333.7	313.9	297.3	284.7	276.0	272.8	276.0	284.7	297.3
140°	388.3	364.5	341.6	321.8	306.0	293.4	285.5	281.5	285.5	293.4	306.0
142.5°	393.0	370.1	347.9	329.7	313.9	302.9	294.2	291.0	294.2	302.9	313.9
145°	396.2	374.8	354.3	336.1	322.6	310.8	303.6	301.3	303.6	310.8	322.6
147.5°	398.5	378.8	359.8	344.0	330.5	320.2	313.1	311.6	313.1	320.2	330.5
150°	399.3	382.7	364.5	350.3	339.2	328.9	322.6	321.8	322.6	328.9	339.2
152.5°	400.9	385.1	370.1	356.6	347.1	338.4	332.1	332.1	332.1	338.4	347.1
155°	400.9	388.3	374.8	363.7	355.0	347.1	342.4	342.4	342.4	347.1	355.0
157.5°	401.7	389.8	378.8	370.1	362.2	355.0	351.1	350.3	351.1	355.0	362.2
160°	401.7	392.2	382.7	374.8	369.3	362.9	359.8	359.8	359.8	362.9	369.3
162.5°	400.9	393.0	385.1	378.8	374.0	369.3	366.9	366.9	366.9	369.3	374.0
165°	399.3	393.8	387.5	381.9	378.8	374.8	373.2	374.0	373.2	374.8	378.8
167.5°	398.5	393.8	389.0	385.1	382.7	379.6	378.8	379.6	378.8	379.6	382.7
170°	396.2	393.0	389.0	387.5	385.9	383.5	382.7	384.3	382.7	383.5	385.9
172.5°	395.4	393.0	389.8	389.0	388.3	386.7	386.7	387.5	386.7	386.7	388.3
175°	393.8	392.2	390.6	389.8	389.8	388.3	389.0	389.8	389.0	388.3	389.8
177.5°	393.0	391.4	390.6	390.6	390.6	389.8	390.6	391.4	390.6	389.8	390.6
180°	390.6	390.6	390.6	390.6	390.6	390.6	390.6	390.6	390.6	390.6	390.6



TEST NUMBER: P831059

CATALOG NUMBER: S123DIP-S1000D1025U927-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	2271.9	2271.9	2271.9	2271.9	2271.9	2271.9	2271.9	2271.9	2271.9	2271.9	2271.9
2.5°	2180.2	2159.6	2139.1	2123.3	2107.4	2080.6	2053.7	2047.4	2041.0	2032.1	2023.1
5°	2067.4	2016.8	1966.2	1920.8	1875.5	1840.2	1804.9	1781.7	1758.5	1741.6	1724.8
7.5°	1935.6	1859.7	1783.8	1730.0	1676.3	1625.1	1574.0	1557.7	1541.3	1519.2	1497.0
10°	1808.0	1724.2	1640.4	1570.3	1500.2	1450.1	1400.0	1380.0	1360.0	1332.0	1304.1
12.5°	1694.2	1602.5	1510.7	1440.1	1369.5	1321.0	1272.5	1243.5	1214.5	1198.7	1182.9
15°	1575.0	1477.0	1379.0	1313.6	1248.2	1204.5	1160.7	1135.4	1110.1	1094.8	1079.6
17.5°	1469.6	1372.6	1275.6	1212.9	1150.2	1110.1	1070.1	1047.9	1025.8	1014.2	1002.6
20°	1369.5	1274.6	1179.7	1118.6	1057.4	1024.7	992.0	977.8	963.6	954.1	944.6
22.5°	1277.7	1184.4	1091.1	1039.0	986.8	960.4	934.1	924.0	914.0	906.1	898.2
25°	1186.0	1102.7	1019.5	975.2	930.9	909.3	887.7	877.7	867.6	859.7	851.8
27.5°	1111.2	1031.6	952.0	914.0	876.1	859.2	842.3	834.4	826.5	819.2	811.8
30°	1038.4	967.3	896.1	863.4	830.7	815.5	800.2	792.3	784.4	777.5	770.7
32.5°	971.0	909.8	848.7	818.6	788.6	775.9	763.3	753.8	744.3	739.0	733.8
35°	906.7	851.8	797.0	772.2	747.5	734.8	722.2	714.3	706.3	702.1	697.9
37.5°	851.8	802.8	753.8	730.1	706.3	694.2	682.1	675.2	668.4	666.8	665.2
40°	796.0	753.8	711.6	688.4	665.2	654.7	644.1	639.9	635.7	634.7	633.6
42.5°	749.6	708.5	667.3	646.3	625.2	616.2	607.2	605.1	603.0	604.6	606.2
45°	695.8	661.5	627.3	607.8	588.3	580.9	573.5	571.9	570.3	573.5	576.7
47.5°	650.5	618.8	587.2	568.8	550.3	545.0	539.8	539.2	538.7	542.9	547.2
50°	604.1	573.5	542.9	528.2	513.4	508.7	503.9	505.5	507.1	513.9	520.8
52.5°	560.9	532.4	503.9	490.2	476.5	473.4	470.2	473.9	477.6	485.0	492.3
55°	513.4	487.6	461.8	451.2	440.7	437.5	434.4	441.7	449.1	456.0	462.8
57.5°	468.1	445.4	422.8	413.3	403.8	403.3	402.7	409.6	416.4	423.8	431.2
60°	419.6	400.6	381.6	374.3	366.9	367.9	369.0	376.9	384.8	390.6	396.4
62.5°	375.3	359.5	343.7	336.8	330.0	332.6	335.3	343.2	351.1	357.9	364.8
65°	331.0	317.9	304.7	299.9	295.2	298.9	302.6	309.4	316.3	321.0	325.8
67.5°	288.9	277.8	266.7	263.0	259.3	263.0	266.7	273.6	280.4	285.2	289.9
70°	244.6	235.6	226.7	224.0	221.4	225.6	229.8	235.6	241.4	246.2	250.9
72.5°	203.5	196.6	189.8	189.2	188.7	192.4	196.1	201.9	207.7	210.8	214.0
75°	163.4	159.7	156.0	155.5	155.0	158.7	162.4	165.5	168.7	171.3	174.0
77.5°	127.6	124.4	121.2	121.8	122.3	124.9	127.6	130.7	133.9	135.5	137.1
80°	90.7	89.6	88.6	89.6	90.7	92.8	94.9	97.0	99.1	100.2	101.2
82.5°	62.2	61.1	60.1	61.7	63.3	64.8	66.4	68.0	69.6	70.1	70.6
85°	35.8	37.4	39.0	39.0	39.0	39.5	40.1	40.6	41.1	40.6	40.1
87.5°	16.9	17.4	17.9	17.9	17.9	18.4	19.0	19.0	19.0	18.4	17.9
90°	8.7	10.3	12.7	15.0	17.4	19.8	19.0	19.8	20.6	21.3	22.9
92.5°	40.3	54.6	79.9	121.8	162.9	147.1	109.9	78.3	60.9	53.0	47.4
95°	72.0	102.8	170.0	287.8	417.5	468.9	380.3	284.7	192.9	151.0	122.6
97.5°	83.0	117.0	183.5	320.2	538.5	721.2	745.7	653.9	493.4	389.0	298.9
100°	94.9	125.7	181.1	298.1	506.1	748.8	904.6	932.3	868.2	775.7	663.4
102.5°	108.3	136.0	184.2	279.1	458.6	697.4	912.5	1024.8	1038.2	994.0	933.1
105°	123.4	147.9	190.6	272.0	421.5	635.8	862.7	1028.0	1107.0	1122.1	1101.5
107.5°	140.0	162.9	200.8	270.4	394.6	581.2	791.5	980.5	1104.7	1166.3	1187.7
110°	156.6	178.7	214.3	274.4	380.3	536.1	725.1	906.2	1051.7	1151.3	1206.7



TEST NUMBER: P831059

CATALOG NUMBER: S123DIP-S1000D1025U927-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	174.0	195.3	227.7	282.3	372.4	506.1	667.4	832.6	982.1	1096.8	1171.9
115°	191.4	212.7	242.8	291.0	371.6	486.3	623.1	769.4	907.0	1023.2	1109.4
117.5°	208.8	228.5	258.6	302.1	372.4	472.9	593.8	720.4	842.1	948.9	1038.2
120°	225.4	245.1	273.6	314.7	375.6	464.2	571.7	683.2	789.9	884.8	964.7
122.5°	240.4	261.7	289.4	326.6	381.1	458.6	553.5	653.9	748.0	834.2	907.0
125°	255.4	276.8	304.4	339.2	386.7	453.9	538.5	628.6	714.8	790.7	854.0
127.5°	269.6	291.0	317.9	349.5	393.0	451.5	524.3	605.7	684.0	753.6	812.1
130°	282.3	303.6	329.7	359.8	399.3	449.1	513.2	584.4	655.5	719.6	773.3
132.5°	294.2	314.7	340.0	369.3	404.1	448.3	502.9	564.6	628.6	687.2	737.8
135°	304.4	325.8	350.3	377.2	408.8	447.6	494.2	547.2	603.3	654.7	699.8
137.5°	313.9	333.7	357.4	383.5	412.0	446.0	486.3	530.6	578.0	623.9	664.2
140°	321.8	341.6	364.5	388.3	415.1	445.2	479.2	516.4	556.7	594.6	628.6
142.5°	329.7	347.9	370.1	393.0	417.5	443.6	472.9	502.9	536.1	567.8	596.2
145°	336.1	354.3	374.8	396.2	418.3	442.0	467.3	492.6	518.7	544.0	567.0
147.5°	344.0	359.8	378.8	398.5	418.3	439.7	461.8	483.9	505.3	526.6	543.2
150°	350.3	364.5	382.7	399.3	418.3	436.5	456.3	474.4	492.6	509.2	524.3
152.5°	356.6	370.1	385.1	400.9	415.9	432.5	449.9	465.7	480.8	495.0	506.9
155°	363.7	374.8	388.3	400.9	414.3	427.8	443.6	457.0	469.7	481.6	491.0
157.5°	370.1	378.8	389.8	401.7	412.0	423.8	436.5	447.6	458.6	468.1	476.0
160°	374.8	382.7	392.2	401.7	410.4	419.1	429.4	439.7	448.3	456.3	461.8
162.5°	378.8	385.1	393.0	400.9	407.2	414.3	422.3	430.2	437.3	444.4	449.1
165°	381.9	387.5	393.8	399.3	404.1	409.6	415.9	422.3	427.0	432.5	436.5
167.5°	385.1	389.0	393.8	398.5	400.9	404.9	409.6	415.1	419.1	422.3	425.4
170°	387.5	389.0	393.0	396.2	397.7	400.1	404.1	408.0	410.4	413.6	415.1
172.5°	389.0	389.8	393.0	395.4	395.4	396.2	398.5	401.7	403.3	405.6	406.4
175°	389.8	390.6	392.2	393.8	393.0	393.0	394.6	396.2	397.0	398.5	398.5
177.5°	390.6	390.6	391.4	393.0	391.4	390.6	391.4	392.2	393.0	393.8	393.8
180°	390.6	390.6	390.6	390.6	390.6	390.6	390.6	390.6	390.6	390.6	390.6



TEST NUMBER: P831059

CATALOG NUMBER: S123DIP-S1000D1025U927-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	2271.9	2271.9	2271.9	2271.9
2.5°	2019.4	2015.7	2001.0	1986.2
5°	1712.1	1699.4	1695.2	1691.0
7.5°	1496.0	1494.9	1472.8	1450.6
10°	1305.7	1307.3	1287.2	1267.2
12.5°	1169.7	1156.5	1154.9	1153.3
15°	1067.4	1055.3	1053.2	1051.1
17.5°	995.2	987.8	985.7	983.6
20°	940.4	936.2	932.5	928.8
22.5°	892.9	887.7	884.5	881.4
25°	847.1	842.3	841.3	840.2
27.5°	806.0	800.2	800.2	800.2
30°	767.0	763.3	761.7	760.1
32.5°	730.6	727.4	727.4	727.4
35°	696.3	694.7	692.6	690.5
37.5°	665.2	665.2	664.2	663.1
40°	635.2	636.8	636.8	636.8
42.5°	607.8	609.4	609.4	609.4
45°	579.3	581.9	583.0	584.1
47.5°	551.4	555.6	556.6	557.7
50°	524.0	527.1	527.7	528.2
52.5°	496.0	499.7	502.3	505.0
55°	466.5	470.2	471.8	473.4
57.5°	434.9	438.6	439.1	439.6
60°	400.1	403.8	404.8	405.9
62.5°	366.9	369.0	370.0	371.1
65°	328.9	332.1	334.2	336.3
67.5°	292.6	295.2	295.2	295.2
70°	252.0	253.0	254.6	256.2
72.5°	214.5	215.1	215.1	215.1
75°	175.0	176.1	176.6	177.1
77.5°	137.6	138.1	138.1	138.1
80°	100.7	100.2	100.2	100.2
82.5°	69.1	67.5	67.5	67.5
85°	39.5	39.0	39.5	40.1
87.5°	17.9	17.9	17.9	17.9
90°	22.1	22.9	23.7	22.9
92.5°	45.9	42.7	43.5	41.9
95°	107.5	100.4	94.9	91.7
97.5°	245.9	215.9	196.9	188.2
100°	583.6	525.8	495.0	495.8
102.5°	875.3	832.6	808.1	785.2
105°	1065.1	1035.1	1009.8	1005.8
107.5°	1182.9	1168.7	1158.4	1149.7
110°	1228.8	1235.1	1233.6	1232.0



TEST NUMBER: P831059

CATALOG NUMBER: S123DIP-S1000D1025U927-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
112.5°	1216.9	1239.9	1247.8	1248.6
115°	1168.7	1203.5	1219.3	1223.3
117.5°	1099.9	1138.7	1162.4	1167.9
120°	1027.2	1071.5	1090.4	1095.2
122.5°	960.7	999.5	1020.8	1027.2
125°	904.6	939.4	959.2	964.7
127.5°	858.0	888.0	906.2	910.9
130°	815.3	843.7	860.3	866.6
132.5°	776.5	805.0	819.2	823.2
135°	738.5	762.3	776.5	782.0
137.5°	697.4	721.9	733.8	738.5
140°	658.7	680.8	693.5	692.7
142.5°	620.7	639.7	650.8	650.0
145°	586.7	603.3	609.7	611.2
147.5°	559.1	570.9	577.2	578.0
150°	536.1	544.8	549.6	549.6
152.5°	515.6	523.5	525.8	525.8
155°	498.2	504.5	506.1	506.9
157.5°	482.4	487.1	488.7	488.7
160°	467.3	472.1	472.1	471.3
162.5°	452.3	456.3	456.3	455.5
165°	439.7	442.8	442.0	442.0
167.5°	427.0	429.4	428.6	428.6
170°	415.9	417.5	416.7	416.7
172.5°	406.4	408.0	406.4	405.6
175°	398.5	399.3	398.5	397.7
177.5°	393.0	393.8	392.2	392.2
180°	390.6	390.6	390.6	390.6



TEST NUMBER: P831059

CATALOG NUMBER: S123DIP-S1000D1025U927-4F0-1E-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	15.17	16.04	16.09	16.97	18.16	17.40	18.28	18.32	19.21	20.40
	3H	16.82	17.60	17.75	18.54	19.76	18.83	19.61	19.76	20.55	21.77
	4H	17.39	18.13	18.34	19.08	20.30	19.28	20.02	20.22	20.96	22.19
	6H	17.77	18.44	18.72	19.39	20.63	19.56	20.24	20.51	21.19	22.43
	8H	17.86	18.51	18.82	19.47	20.71	19.62	20.27	20.58	21.23	22.47
	12H	17.91	18.52	18.87	19.48	20.75	19.64	20.25	20.61	21.21	22.48
4H	2H	15.74	16.48	16.69	17.43	18.65	17.57	18.31	18.52	19.25	20.48
	3H	17.57	18.19	18.53	19.16	20.40	19.19	19.80	20.15	20.78	22.02
	4H	18.27	18.83	19.24	19.80	21.07	19.77	20.33	20.74	21.30	22.57
	6H	18.75	19.23	19.73	20.22	21.49	20.18	20.66	21.16	21.65	22.92
	8H	18.89	19.33	19.87	20.32	21.60	20.29	20.74	21.27	21.73	23.01
	12H	18.95	19.36	19.95	20.36	21.64	20.34	20.74	21.34	21.74	23.03
8H	4H	18.54	18.99	19.52	19.97	21.25	19.88	20.33	20.86	21.32	22.59
	6H	19.13	19.50	20.14	20.53	21.81	20.38	20.75	21.39	21.78	23.06
	8H	19.34	19.66	20.35	20.68	21.97	20.56	20.89	21.58	21.90	23.20
	12H	19.46	19.75	20.48	20.76	22.10	20.67	20.95	21.68	21.96	23.30
12H	4H	18.54	18.95	19.54	19.95	21.23	19.86	20.26	20.86	21.26	22.55
	6H	19.18	19.51	20.19	20.52	21.82	20.40	20.72	21.41	21.74	23.04
	8H	19.41	19.70	20.43	20.71	22.05	20.60	20.88	21.62	21.89	23.24