

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: P831060

Luminaire Tested: S123DIP-S1000D1025U930-4F0-1E-UDD-G

Issue Date: 05/03/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P831060  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2301-905-1, G3-1807-864-5)  
Test Lab: INNOVATION CENTER  
Issue Date: 05/03/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123DIP-S1000D1025U930-4F0-1E-UDD-G  
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 1000 LUMENS PER FOOT, GRAZE OPTIC  
UPLIGHT 1025 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: -

**Summary**

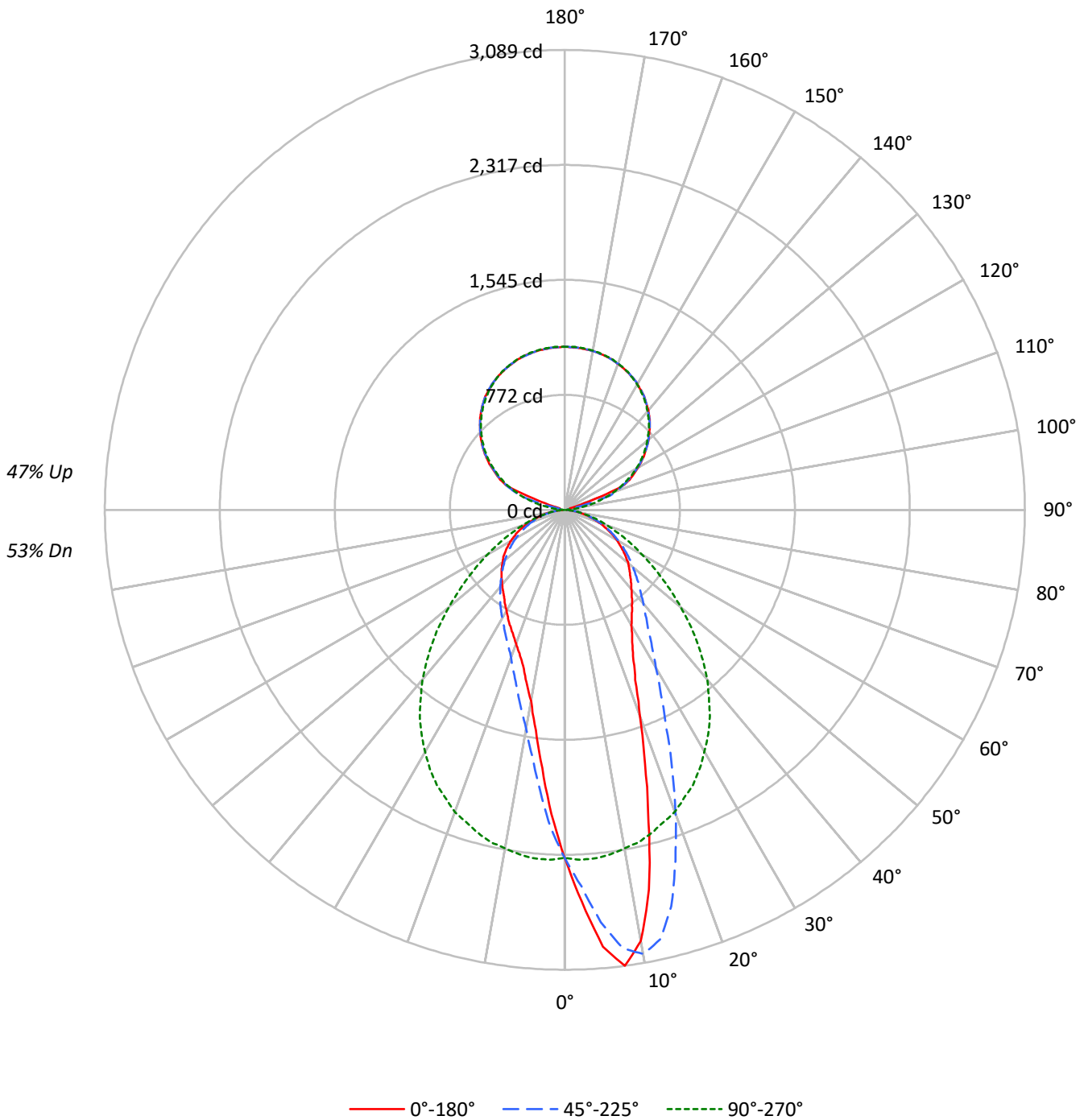
Lumens per Lamp: N/A  
Luminaire Lumens: 7100.0 lumens  
Efficiency: N/A  
Efficacy: 116.4 lumens/watt  
Spacing Criteria (0/90/45): 0.65 / 1.19 / 0.89  
Luminous Opening: Rectangular (W 4' x L: 0.25' x H: 0')  
CIE Type: General Diffuse

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	100	100	100	100	85	85	85	71	71	71	59	59	59	53				
1	99	95	91	88	92	88	85	82	75	73	71	64	62	61	53	52	51	46				
2	91	84	78	73	84	78	73	68	67	63	60	57	54	51	47	45	44	39				
3	83	74	67	61	77	69	63	58	59	55	51	51	47	44	42	40	38	34				
4	76	66	58	53	71	62	55	50	53	48	44	46	42	39	38	36	33	30				
5	70	59	51	46	65	55	48	43	48	43	39	41	37	34	35	32	30	26				
6	65	54	46	40	60	50	43	38	44	38	34	38	34	30	32	29	26	24				
7	61	49	41	36	56	46	39	34	40	34	30	35	30	27	30	26	24	21				
8	56	44	37	32	52	42	35	30	37	31	27	32	28	25	27	24	22	19				
9	53	41	34	29	49	38	32	27	34	29	25	30	25	22	26	22	20	18				
10	49	38	31	26	46	36	29	25	31	26	23	28	23	20	24	21	18	16				

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

	0°	45°	90°	135°	180°
0°	25168	25168	25168	25168	25168
5°	31829	30041	25393	20464	18805
10°	32138	33111	25224	16312	14255
15°	24206	30741	25052	13814	12055
20°	16866	24876	24733	12080	10950
25°	12860	19130	24188	11114	10271
30°	11125	15198	23317	10432	9723
35°	10322	12832	22312	9938	9339
40°	9773	11511	20903	9468	9208
45°	9447	10653	19110	9100	9150
50°	9284	9975	16988	8766	9103
55°	8938	9479	14904	8450	9143
60°	8620	8947	12848	8153	8992
65°	8097	8443	11082	7834	8815
70°	7478	7802	9426	7308	8299
75°	6771	6995	8077	6791	7582
80°	5585	6118	6391	5920	6391
85°	4421	4952	4693	5027	5088

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 80°  
 Vertical Angle: 45°  
 Luminance: 21818 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	221.1	3.1
10°-20°	549.9	7.7
20°-30°	651.1	9.2
30°-40°	654.7	9.2
40°-50°	600.7	8.5
50°-60°	495.8	7.0
60°-70°	350.7	4.9
70°-80°	187.2	2.6
80°-90°	49.7	0.7
90°-100°	38.6	0.5
100°-110°	186.7	2.6
110°-120°	457.6	6.4
120°-130°	581.0	8.2
130°-140°	620.6	8.7
140°-150°	580.4	8.2
150°-160°	468.1	6.6
160°-170°	302.1	4.3
170°-180°	104.1	1.5
0°-30°	1422.1	20.0
0°-40°	2076.8	29.3
0°-60°	3173.3	44.7
0°-90°	3760.9	53.0
90°-120°	682.9	9.6
90°-150°	2464.8	34.7
90°-180°	3339.0	47.0
0°-180°	7100.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	2338	2338	2338	2338	2338	
5°	2946	2780	2350	1894	1740	281
15°	2172	2759	2248	1240	1082	600
25°	1083	1611	2037	936	865	511
35°	786	976	1698	756	711	494
45°	621	700	1255	598	601	481
55°	476	505	794	450	487	426
65°	318	332	435	308	346	316
75°	163	168	194	163	182	171
85°	36	40	38	41	41	40
90°	24	20	1	20	24	13
95°	31	25	50	25	31	26
105°	36	178	242	178	36	75
115°	478	467	455	467	478	450
125°	654	651	641	651	654	585
135°	806	806	798	806	806	622
145°	930	928	921	928	930	581
155°	1013	1014	1015	1014	1013	467
165°	1068	1067	1070	1067	1068	302
175°	1091	1092	1095	1092	1091	104
180°	1095	1095	1095	1095	1095	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	2338.2	2338.2	2338.2	2338.2	2338.2	2338.2	2338.2	2338.2	2338.2	2338.2	2338.2
2.5°	2635.5	2632.8	2630.1	2616.5	2602.9	2596.4	2589.9	2570.4	2550.9	2529.2	2507.5
5°	2945.8	2953.4	2961.0	2952.3	2943.6	2917.1	2890.5	2855.2	2819.9	2780.3	2740.7
7.5°	3089.0	3093.4	3097.7	3092.3	3086.9	3079.8	3072.8	3041.3	3009.8	2969.1	2928.5
10°	2940.4	2950.2	2959.9	2981.1	3002.2	3026.1	3050.0	3045.6	3041.3	3029.4	3017.4
12.5°	2613.8	2625.7	2637.7	2680.0	2722.3	2776.5	2830.8	2877.5	2924.1	2956.7	2989.2
15°	2172.2	2205.3	2238.4	2276.9	2315.4	2395.2	2474.9	2573.1	2671.3	2758.6	2846.0
17.5°	1789.2	1801.7	1814.1	1855.4	1896.6	1997.0	2097.3	2210.7	2324.1	2468.9	2613.8
20°	1472.4	1483.8	1495.1	1549.4	1603.6	1682.3	1761.0	1888.5	2016.0	2171.7	2327.4
22.5°	1236.9	1254.8	1272.7	1303.1	1333.5	1408.9	1484.3	1597.7	1711.1	1883.0	2055.0
25°	1082.8	1095.9	1108.9	1127.3	1145.8	1206.0	1266.2	1359.5	1452.8	1610.7	1768.6
27.5°	977.6	983.0	988.4	1006.9	1025.3	1064.4	1103.5	1183.7	1264.0	1398.0	1532.0
30°	895.1	898.9	902.7	919.0	935.3	961.9	988.4	1046.5	1104.5	1222.8	1341.1
32.5°	837.6	840.3	843.1	855.5	868.0	887.0	906.0	948.3	990.6	1088.3	1185.9
35°	785.5	787.2	788.8	798.0	807.2	821.4	835.5	867.5	899.5	976.5	1053.5
37.5°	740.0	742.1	744.3	749.7	755.2	767.6	780.1	805.6	831.1	890.3	949.4
40°	695.5	699.3	703.1	706.9	710.7	721.0	731.3	750.8	770.4	819.2	868.0
42.5°	657.5	661.3	665.1	666.7	668.4	674.3	680.3	698.2	716.1	752.5	788.8
45°	620.6	622.3	623.9	625.5	627.1	632.0	636.9	652.6	668.4	699.8	731.3
47.5°	587.0	587.0	587.0	588.1	589.2	593.5	597.8	609.2	620.6	645.0	669.5
50°	554.4	554.4	554.4	552.8	551.2	553.9	556.6	565.3	574.0	595.7	617.4
52.5°	515.4	515.4	515.4	515.9	516.5	516.5	516.5	524.1	531.7	551.2	570.7
55°	476.3	478.5	480.7	479.0	477.4	478.5	479.6	484.5	489.3	505.1	520.8
57.5°	437.3	438.3	439.4	438.9	438.3	438.9	439.4	443.8	448.1	460.0	472.0
60°	400.4	400.4	400.4	399.3	398.2	399.3	400.4	402.5	404.7	415.6	426.4
62.5°	359.1	359.7	360.2	360.8	361.3	360.2	359.1	361.9	364.6	372.7	380.8
65°	317.9	318.5	319.0	320.6	322.2	321.2	320.1	322.8	325.5	331.5	337.4
67.5°	281.0	279.9	278.8	279.4	279.9	281.6	283.2	283.7	284.3	290.8	297.3
70°	237.6	238.7	239.8	239.2	238.7	239.2	239.8	241.4	243.0	247.9	252.8
72.5°	198.6	199.1	199.6	199.6	199.6	200.7	201.8	203.4	205.1	207.8	210.5
75°	162.8	162.8	162.8	163.8	164.9	165.5	166.0	166.0	166.0	168.2	170.3
77.5°	123.7	126.4	129.1	128.6	128.0	129.1	130.2	131.8	133.5	134.5	135.6
80°	90.1	90.1	90.1	90.6	91.1	92.8	94.4	95.5	96.6	98.7	100.9
82.5°	57.5	58.0	58.6	60.2	61.8	62.9	64.0	65.6	67.3	67.3	67.3
85°	35.8	34.7	33.6	34.7	35.8	36.9	38.0	38.5	39.1	40.1	41.2
87.5°	17.4	17.4	17.4	17.4	17.4	17.9	18.4	18.4	18.4	18.4	18.4
90°	24.4	24.1	23.7	23.3	23.0	22.4	21.7	21.0	20.3	19.5	17.2
92.5°	27.7	27.5	27.3	27.1	26.9	26.2	25.0	23.7	22.4	21.2	19.5
95°	30.9	30.9	30.9	30.9	30.9	30.3	29.0	27.8	26.5	25.2	23.2
97.5°	33.4	33.2	33.0	32.8	32.6	31.8	30.4	28.9	27.5	26.0	35.3
100°	34.2	34.0	33.8	33.6	33.5	32.6	31.2	29.7	28.3	26.9	55.1
102.5°	35.0	34.6	34.3	33.9	33.5	36.3	42.3	48.3	54.3	60.2	91.7
105°	35.8	35.4	35.1	34.7	34.4	50.2	82.2	114.2	146.2	178.2	194.5
107.5°	84.6	108.3	132.0	155.7	179.4	205.2	233.0	260.9	288.7	316.6	313.9
110°	223.8	249.7	275.5	301.4	327.2	343.1	349.1	355.1	361.1	367.0	365.0



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	424.0	424.3	424.7	425.1	425.4	424.8	423.2	421.5	419.9	418.3	416.3
115°	478.5	477.8	477.1	476.3	475.6	474.3	472.5	470.7	468.9	467.1	465.5
117.5°	522.5	522.3	522.1	521.9	521.7	520.9	519.5	518.0	516.6	515.1	514.2
120°	568.0	568.0	568.0	568.0	568.0	567.3	565.9	564.4	563.0	561.5	561.0
122.5°	612.8	612.6	612.4	612.2	612.1	611.5	610.6	609.7	608.8	607.9	607.2
125°	654.3	653.9	653.6	653.2	652.8	652.5	652.1	651.8	651.4	651.0	650.3
127.5°	695.0	695.3	695.7	696.1	696.4	696.3	695.8	695.2	694.7	694.2	693.3
130°	734.0	734.4	734.8	735.1	735.5	735.3	734.6	733.9	733.1	732.4	731.7
132.5°	769.8	770.4	770.9	771.5	772.0	771.9	771.2	770.5	769.8	769.0	768.5
135°	806.5	807.0	807.5	808.1	808.6	808.6	808.1	807.5	807.0	806.5	805.7
137.5°	841.5	841.8	842.2	842.5	842.9	842.6	841.7	840.8	839.9	839.0	838.7
140°	872.4	872.7	873.1	873.5	873.8	873.6	872.9	872.2	871.5	870.8	870.2
142.5°	900.9	901.4	901.9	902.5	903.0	903.0	902.5	901.9	901.4	900.9	900.3
145°	930.2	930.2	930.2	930.2	930.2	930.0	929.6	929.3	928.9	928.5	928.2
147.5°	951.3	952.2	953.1	954.0	954.9	955.2	954.8	954.5	954.1	953.8	953.4
150°	975.7	976.3	976.8	977.4	977.9	978.0	977.6	977.3	976.9	976.5	976.2
152.5°	995.3	996.2	997.1	998.0	998.9	999.0	998.2	997.5	996.8	996.1	995.9
155°	1013.2	1014.3	1015.3	1016.4	1017.5	1017.6	1016.7	1015.8	1014.9	1014.0	1013.8
157.5°	1028.6	1030.1	1031.5	1033.0	1034.4	1034.6	1033.5	1032.4	1031.3	1030.3	1030.4
160°	1043.3	1044.5	1045.8	1047.1	1048.3	1048.4	1047.3	1046.3	1045.2	1044.1	1044.3
162.5°	1057.1	1058.2	1059.3	1060.4	1061.4	1061.4	1060.1	1058.8	1057.6	1056.3	1056.5
165°	1067.7	1069.0	1070.2	1071.5	1072.8	1072.7	1071.2	1069.8	1068.3	1066.9	1067.1
167.5°	1075.8	1077.3	1078.7	1080.2	1081.6	1081.6	1080.2	1078.7	1077.3	1075.8	1075.8
170°	1083.2	1084.6	1086.0	1087.5	1088.9	1088.9	1087.5	1086.0	1084.6	1083.2	1083.2
172.5°	1087.2	1088.8	1090.5	1092.1	1093.7	1093.8	1092.4	1090.9	1089.5	1088.0	1087.9
175°	1091.3	1092.7	1094.2	1095.6	1097.1	1097.2	1095.9	1094.6	1093.4	1092.1	1091.9
177.5°	1092.1	1093.9	1095.7	1097.5	1099.3	1099.5	1098.1	1096.6	1095.2	1093.7	1093.5
180°	1095.4	1095.4	1095.4	1095.4	1095.4	1095.4	1095.4	1095.4	1095.4	1095.4	1095.4



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	2338.2	2338.2	2338.2	2338.2	2338.2	2338.2	2338.2	2338.2	2338.2	2338.2	2338.2
2.5°	2501.0	2494.4	2470.6	2446.7	2419.6	2392.5	2372.4	2352.3	2322.5	2292.6	2268.2
5°	2710.4	2680.0	2629.5	2579.1	2510.7	2442.4	2396.3	2350.1	2288.3	2226.4	2177.1
7.5°	2876.4	2824.3	2753.8	2683.2	2593.7	2504.2	2419.6	2334.9	2240.6	2146.2	2069.1
10°	2982.2	2946.9	2865.5	2784.1	2664.2	2544.4	2426.1	2307.8	2186.3	2064.8	1962.8
12.5°	2992.5	2995.7	2920.9	2846.0	2710.4	2574.7	2431.0	2287.2	2134.2	1981.2	1862.4
15°	2901.9	2957.7	2916.5	2875.3	2738.6	2601.9	2425.0	2248.1	2071.8	1895.5	1758.3
17.5°	2733.7	2853.6	2859.6	2865.5	2728.8	2592.1	2396.3	2200.4	2000.8	1801.1	1656.8
20°	2504.2	2681.1	2741.8	2802.6	2691.4	2580.2	2369.7	2159.2	1935.7	1712.2	1560.8
22.5°	2269.8	2484.7	2595.9	2707.1	2624.6	2542.2	2318.1	2094.1	1858.1	1622.1	1468.6
25°	2002.9	2237.3	2408.2	2579.1	2528.6	2478.2	2257.4	2036.6	1785.4	1534.2	1377.4
27.5°	1770.2	2008.4	2214.5	2420.7	2409.8	2399.0	2179.8	1960.6	1703.5	1446.3	1295.0
30°	1563.0	1784.8	2015.4	2246.0	2272.6	2299.1	2087.6	1876.0	1618.3	1360.6	1214.7
32.5°	1379.6	1573.3	1820.7	2068.0	2120.1	2172.2	1981.2	1790.3	1535.3	1280.3	1139.8
35°	1229.3	1405.1	1652.5	1899.9	1965.0	2030.1	1864.1	1698.0	1449.6	1201.1	1067.1
37.5°	1096.4	1243.4	1484.8	1726.3	1806.0	1885.8	1737.1	1588.5	1355.7	1123.0	999.8
40°	986.3	1104.5	1326.4	1548.3	1640.5	1732.8	1610.2	1487.6	1266.8	1046.0	932.6
42.5°	894.1	999.3	1200.6	1401.8	1490.3	1578.7	1475.1	1371.5	1175.1	978.7	875.1
45°	815.4	899.5	1082.3	1265.1	1349.2	1433.3	1344.3	1255.4	1082.3	909.2	812.7
47.5°	741.6	813.8	970.0	1126.2	1201.1	1276.0	1206.5	1137.1	990.6	844.1	756.8
50°	675.4	733.5	870.2	1006.9	1072.0	1137.1	1075.8	1014.5	894.1	773.6	697.7
52.5°	617.9	665.1	779.6	894.1	949.9	1005.8	953.2	900.6	805.1	709.6	643.4
55°	561.0	601.1	700.4	799.7	837.6	875.6	834.9	794.2	717.2	640.2	584.3
57.5°	507.8	543.6	625.0	706.3	735.6	764.9	728.0	691.2	633.1	575.1	528.4
60°	455.7	485.0	552.8	620.6	638.5	656.4	626.6	596.8	556.1	515.4	473.6
62.5°	407.4	434.0	484.5	534.9	546.8	558.8	536.0	513.2	482.3	451.4	418.8
65°	357.5	377.6	418.8	460.0	467.6	475.2	455.2	435.1	411.8	388.4	364.6
67.5°	311.4	325.5	359.1	392.8	393.3	393.9	377.6	361.3	348.3	335.3	316.3
70°	266.4	279.9	302.2	324.4	325.0	325.5	312.5	299.5	289.7	279.9	265.8
72.5°	220.3	230.0	246.8	263.7	262.6	261.5	253.4	245.2	237.6	230.0	219.7
75°	178.5	186.6	198.0	209.4	206.2	202.9	198.6	194.2	187.7	181.2	174.7
77.5°	140.5	145.4	151.9	158.4	156.2	154.1	150.3	146.5	141.6	136.7	134.0
80°	103.1	105.2	109.6	113.9	112.8	111.8	107.4	103.1	102.0	100.9	97.1
82.5°	70.0	72.7	73.8	74.9	74.3	73.8	70.5	67.3	66.2	65.1	64.6
85°	41.8	42.3	42.9	43.4	41.8	40.1	39.1	38.0	38.0	38.0	37.4
87.5°	19.0	19.5	19.5	19.5	19.0	18.4	17.4	16.3	16.8	17.4	17.4
90°	14.8	12.5	10.1	8.0	6.2	4.4	2.6	0.8	2.6	4.4	6.2
92.5°	17.9	16.3	14.6	14.4	15.5	16.5	17.6	18.7	17.6	16.5	15.5
95°	21.2	19.3	17.3	20.0	27.4	34.8	42.2	49.6	42.2	34.8	27.4
97.5°	44.5	53.7	62.9	70.1	75.1	80.2	85.3	90.3	85.3	80.2	75.1
100°	83.3	111.5	139.7	152.0	148.4	144.8	141.1	137.5	141.1	144.8	148.4
102.5°	123.2	154.6	186.1	200.6	198.3	195.9	193.6	191.2	193.6	195.9	198.3
105°	210.8	227.0	243.3	250.5	248.5	246.5	244.5	242.5	244.5	246.5	248.5
107.5°	311.1	308.4	305.7	303.5	301.9	300.3	298.7	297.0	298.7	300.3	301.9
110°	363.0	361.1	359.1	357.3	355.9	354.4	353.0	351.6	353.0	354.4	355.9





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	414.3	412.3	410.3	408.7	407.4	406.2	404.9	403.6	404.9	406.2	407.4
115°	463.9	462.2	460.6	459.2	458.2	457.1	456.0	454.9	456.0	457.1	458.2
117.5°	513.3	512.4	511.5	510.4	509.2	507.9	506.6	505.4	506.6	507.9	509.2
120°	560.4	559.9	559.3	558.3	556.6	555.0	553.4	551.7	553.4	555.0	556.6
122.5°	606.5	605.7	605.0	604.0	602.7	601.5	600.2	598.9	600.2	601.5	602.7
125°	649.6	648.9	648.1	647.1	645.6	644.2	642.7	641.3	642.7	644.2	645.6
127.5°	692.4	691.4	690.5	689.4	687.9	686.5	685.0	683.6	685.0	686.5	687.9
130°	731.0	730.2	729.5	728.4	727.0	725.5	724.1	722.6	724.1	725.5	727.0
132.5°	767.9	767.4	766.9	765.9	764.4	763.0	761.5	760.1	761.5	763.0	764.4
135°	805.0	804.3	803.6	802.7	801.6	800.5	799.4	798.3	799.4	800.5	801.6
137.5°	838.3	837.9	837.6	836.7	835.2	833.8	832.3	830.9	832.3	833.8	835.2
140°	869.7	869.1	868.6	867.8	866.7	865.6	864.5	863.4	864.5	865.6	866.7
142.5°	899.8	899.2	898.7	897.9	896.8	895.7	894.6	893.5	894.6	895.7	896.8
145°	927.8	927.4	927.1	926.3	925.0	923.7	922.5	921.2	922.5	923.7	925.0
147.5°	953.0	952.7	952.3	951.7	950.8	949.9	949.0	948.1	949.0	949.9	950.8
150°	975.8	975.5	975.1	974.6	974.1	973.6	973.0	972.5	973.0	973.6	974.1
152.5°	995.7	995.5	995.4	995.2	995.0	994.8	994.6	994.4	994.6	994.8	995.0
155°	1013.6	1013.4	1013.3	1013.3	1013.7	1014.1	1014.4	1014.8	1014.4	1014.1	1013.7
157.5°	1030.6	1030.8	1031.0	1031.1	1031.1	1031.1	1031.1	1031.1	1031.1	1031.1	1031.1
160°	1044.5	1044.6	1044.8	1045.0	1045.2	1045.4	1045.5	1045.7	1045.5	1045.4	1045.2
162.5°	1056.7	1056.8	1057.0	1057.4	1057.9	1058.5	1059.0	1059.6	1059.0	1058.5	1057.9
165°	1067.2	1067.4	1067.6	1068.0	1068.5	1069.0	1069.6	1070.1	1069.6	1069.0	1068.5
167.5°	1075.8	1075.8	1075.8	1076.2	1076.9	1077.6	1078.4	1079.1	1078.4	1077.6	1076.9
170°	1083.2	1083.2	1083.2	1083.5	1084.2	1085.0	1085.7	1086.4	1085.7	1085.0	1084.2
172.5°	1087.7	1087.5	1087.3	1087.7	1088.6	1089.5	1090.4	1091.3	1090.4	1089.5	1088.6
175°	1091.7	1091.6	1091.4	1091.7	1092.6	1093.5	1094.5	1095.4	1094.5	1093.5	1092.6
177.5°	1093.4	1093.2	1093.0	1093.4	1094.3	1095.2	1096.1	1097.0	1096.1	1095.2	1094.3
180°	1095.4	1095.4	1095.4	1095.4	1095.4	1095.4	1095.4	1095.4	1095.4	1095.4	1095.4



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**CANDELA DISTRIBUTION (continued):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	2338.2	2338.2	2338.2	2338.2	2338.2	2338.2	2338.2	2338.2	2338.2	2338.2	2338.2
2.5°	2243.8	2222.6	2201.5	2185.2	2168.9	2141.3	2113.6	2107.1	2100.6	2091.4	2082.1
5°	2127.7	2075.6	2023.5	1976.9	1930.2	1893.9	1857.5	1833.7	1809.8	1792.4	1775.1
7.5°	1992.1	1914.0	1835.8	1780.5	1725.2	1672.5	1619.9	1603.1	1586.3	1563.5	1540.7
10°	1860.8	1774.5	1688.3	1616.1	1544.0	1492.4	1440.9	1420.3	1399.7	1370.9	1342.2
12.5°	1743.6	1649.2	1554.8	1482.1	1409.4	1359.5	1309.6	1279.8	1249.9	1233.7	1217.4
15°	1621.0	1520.1	1419.2	1351.9	1284.7	1239.6	1194.6	1168.6	1142.5	1126.8	1111.1
17.5°	1512.5	1412.7	1312.9	1248.3	1183.7	1142.5	1101.3	1078.5	1055.7	1043.8	1031.8
20°	1409.4	1311.8	1214.1	1151.2	1088.3	1054.6	1021.0	1006.3	991.7	981.9	972.2
22.5°	1315.0	1219.0	1123.0	1069.3	1015.6	988.4	961.3	951.0	940.7	932.6	924.4
25°	1220.6	1134.9	1049.2	1003.6	958.1	935.8	913.6	903.3	893.0	884.8	876.7
27.5°	1143.6	1061.7	979.8	940.7	901.6	884.3	866.9	858.8	850.7	843.1	835.5
30°	1068.7	995.5	922.3	888.6	855.0	839.3	823.5	815.4	807.2	800.2	793.1
32.5°	999.3	936.4	873.4	842.5	811.6	798.6	785.5	775.8	766.0	760.6	755.2
35°	933.1	876.7	820.3	794.8	769.3	756.3	743.2	735.1	727.0	722.6	718.3
37.5°	876.7	826.2	775.8	751.4	727.0	714.5	702.0	695.0	687.9	686.3	684.6
40°	819.2	775.8	732.4	708.5	684.6	673.8	662.9	658.6	654.3	653.2	652.1
42.5°	771.4	729.1	686.8	665.1	643.4	634.2	625.0	622.8	620.6	622.3	623.9
45°	716.1	680.8	645.6	625.5	605.4	597.8	590.2	588.6	587.0	590.2	593.5
47.5°	669.5	636.9	604.4	585.4	566.4	561.0	555.5	555.0	554.4	558.8	563.1
50°	621.7	590.2	558.8	543.6	528.4	523.5	518.6	520.3	521.9	528.9	536.0
52.5°	577.2	547.9	518.6	504.5	490.4	487.2	483.9	487.7	491.5	499.1	506.7
55°	528.4	501.8	475.2	464.4	453.5	450.3	447.0	454.6	462.2	469.3	476.3
57.5°	481.7	458.4	435.1	425.3	415.6	415.0	414.5	421.5	428.6	436.2	443.8
60°	431.8	412.3	392.8	385.2	377.6	378.7	379.8	387.9	396.0	402.0	408.0
62.5°	386.3	370.0	353.7	346.7	339.6	342.3	345.0	353.2	361.3	368.4	375.4
65°	340.7	327.1	313.6	308.7	303.8	307.6	311.4	318.5	325.5	330.4	335.3
67.5°	297.3	285.9	274.5	270.7	266.9	270.7	274.5	281.6	288.6	293.5	298.4
70°	251.7	242.5	233.3	230.6	227.9	232.2	236.5	242.5	248.5	253.4	258.2
72.5°	209.4	202.4	195.3	194.8	194.2	198.0	201.8	207.8	213.7	217.0	220.3
75°	168.2	164.4	160.6	160.0	159.5	163.3	167.1	170.3	173.6	176.3	179.0
77.5°	131.3	128.0	124.8	125.3	125.9	128.6	131.3	134.5	137.8	139.4	141.1
80°	93.3	92.2	91.1	92.2	93.3	95.5	97.7	99.8	102.0	103.1	104.2
82.5°	64.0	62.9	61.8	63.5	65.1	66.7	68.4	70.0	71.6	72.2	72.7
85°	36.9	38.5	40.1	40.1	40.1	40.7	41.2	41.8	42.3	41.8	41.2
87.5°	17.4	17.9	18.4	18.4	18.4	19.0	19.5	19.5	19.5	19.0	18.4
90°	8.0	10.1	12.5	14.8	17.2	19.5	20.3	21.0	21.7	22.4	23.0
92.5°	14.4	14.6	16.3	17.9	19.5	21.2	22.4	23.7	25.0	26.2	26.9
95°	20.0	17.3	19.3	21.2	23.2	25.2	26.5	27.8	29.0	30.3	30.9
97.5°	70.1	62.9	53.7	44.5	35.3	26.0	27.5	28.9	30.4	31.8	32.6
100°	152.0	139.7	111.5	83.3	55.1	26.9	28.3	29.7	31.2	32.6	33.5
102.5°	200.6	186.1	154.6	123.2	91.7	60.2	54.3	48.3	42.3	36.3	33.5
105°	250.5	243.3	227.0	210.8	194.5	178.2	146.2	114.2	82.2	50.2	34.4
107.5°	303.5	305.7	308.4	311.1	313.9	316.6	288.7	260.9	233.0	205.2	179.4
110°	357.3	359.1	361.1	363.0	365.0	367.0	361.1	355.1	349.1	343.1	327.2



TEST NUMBER: P831060

CATALOG NUMBER: S123DIP-S1000D1025U930-4F0-1E-UDD-G

**CANDELA DISTRIBUTION (continued):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	408.7	410.3	412.3	414.3	416.3	418.3	419.9	421.5	423.2	424.8	425.4
115°	459.2	460.6	462.2	463.9	465.5	467.1	468.9	470.7	472.5	474.3	475.6
117.5°	510.4	511.5	512.4	513.3	514.2	515.1	516.6	518.0	519.5	520.9	521.7
120°	558.3	559.3	559.9	560.4	561.0	561.5	563.0	564.4	565.9	567.3	568.0
122.5°	604.0	605.0	605.7	606.5	607.2	607.9	608.8	609.7	610.6	611.5	612.1
125°	647.1	648.1	648.9	649.6	650.3	651.0	651.4	651.8	652.1	652.5	652.8
127.5°	689.4	690.5	691.4	692.4	693.3	694.2	694.7	695.2	695.8	696.3	696.4
130°	728.4	729.5	730.2	731.0	731.7	732.4	733.1	733.9	734.6	735.3	735.5
132.5°	765.9	766.9	767.4	767.9	768.5	769.0	769.8	770.5	771.2	771.9	772.0
135°	802.7	803.6	804.3	805.0	805.7	806.5	807.0	807.5	808.1	808.6	808.6
137.5°	836.7	837.6	837.9	838.3	838.7	839.0	839.9	840.8	841.7	842.6	842.9
140°	867.8	868.6	869.1	869.7	870.2	870.8	871.5	872.2	872.9	873.6	873.8
142.5°	897.9	898.7	899.2	899.8	900.3	900.9	901.4	901.9	902.5	903.0	903.0
145°	926.3	927.1	927.4	927.8	928.2	928.5	928.9	929.3	929.6	930.0	930.2
147.5°	951.7	952.3	952.7	953.0	953.4	953.8	954.1	954.5	954.8	955.2	954.9
150°	974.6	975.1	975.5	975.8	976.2	976.5	976.9	977.3	977.6	978.0	977.9
152.5°	995.2	995.4	995.5	995.7	995.9	996.1	996.8	997.5	998.2	999.0	998.9
155°	1013.3	1013.3	1013.4	1013.6	1013.8	1014.0	1014.9	1015.8	1016.7	1017.6	1017.5
157.5°	1031.1	1031.0	1030.8	1030.6	1030.4	1030.3	1031.3	1032.4	1033.5	1034.6	1034.4
160°	1045.0	1044.8	1044.6	1044.5	1044.3	1044.1	1045.2	1046.3	1047.3	1048.4	1048.3
162.5°	1057.4	1057.0	1056.8	1056.7	1056.5	1056.3	1057.6	1058.8	1060.1	1061.4	1061.4
165°	1068.0	1067.6	1067.4	1067.2	1067.1	1066.9	1068.3	1069.8	1071.2	1072.7	1072.8
167.5°	1076.2	1075.8	1075.8	1075.8	1075.8	1075.8	1077.3	1078.7	1080.2	1081.6	1081.6
170°	1083.5	1083.2	1083.2	1083.2	1083.2	1083.2	1084.6	1086.0	1087.5	1088.9	1088.9
172.5°	1087.7	1087.3	1087.5	1087.7	1087.9	1088.0	1089.5	1090.9	1092.4	1093.8	1093.7
175°	1091.7	1091.4	1091.6	1091.7	1091.9	1092.1	1093.4	1094.6	1095.9	1097.2	1097.1
177.5°	1093.4	1093.0	1093.2	1093.4	1093.5	1093.7	1095.2	1096.6	1098.1	1099.5	1099.3
180°	1095.4	1095.4	1095.4	1095.4	1095.4	1095.4	1095.4	1095.4	1095.4	1095.4	1095.4



TEST NUMBER: P831060

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**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
0°	2338.2	2338.2	2338.2	2338.2
2.5°	2078.3	2074.5	2059.4	2044.2
5°	1762.1	1749.0	1744.7	1740.4
7.5°	1539.6	1538.5	1515.8	1493.0
10°	1343.8	1345.4	1324.8	1304.2
12.5°	1203.8	1190.3	1188.6	1187.0
15°	1098.6	1086.1	1083.9	1081.8
17.5°	1024.3	1016.7	1014.5	1012.3
20°	967.8	963.5	959.7	955.9
22.5°	919.0	913.6	910.3	907.1
25°	871.8	866.9	865.8	864.8
27.5°	829.5	823.5	823.5	823.5
30°	789.3	785.5	783.9	782.3
32.5°	751.9	748.7	748.7	748.7
35°	716.7	715.0	712.9	710.7
37.5°	684.6	684.6	683.6	682.5
40°	653.7	655.3	655.3	655.3
42.5°	625.5	627.1	627.1	627.1
45°	596.2	598.9	600.0	601.1
47.5°	567.5	571.8	572.9	574.0
50°	539.3	542.5	543.0	543.6
52.5°	510.5	514.3	517.0	519.7
55°	480.1	483.9	485.5	487.2
57.5°	447.6	451.4	451.9	452.5
60°	411.8	415.6	416.6	417.7
62.5°	377.6	379.8	380.8	381.9
65°	338.5	341.8	343.9	346.1
67.5°	301.1	303.8	303.8	303.8
70°	259.3	260.4	262.0	263.7
72.5°	220.8	221.3	221.3	221.3
75°	180.1	181.2	181.7	182.3
77.5°	141.6	142.1	142.1	142.1
80°	103.6	103.1	103.1	103.1
82.5°	71.1	69.4	69.4	69.4
85°	40.7	40.1	40.7	41.2
87.5°	18.4	18.4	18.4	18.4
90°	23.3	23.7	24.1	24.4
92.5°	27.1	27.3	27.5	27.7
95°	30.9	30.9	30.9	30.9
97.5°	32.8	33.0	33.2	33.4
100°	33.6	33.8	34.0	34.2
102.5°	33.9	34.3	34.6	35.0
105°	34.7	35.1	35.4	35.8
107.5°	155.7	132.0	108.3	84.6
110°	301.4	275.5	249.7	223.8



TEST NUMBER: P831060

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**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
112.5°	425.1	424.7	424.3	424.0
115°	476.3	477.1	477.8	478.5
117.5°	521.9	522.1	522.3	522.5
120°	568.0	568.0	568.0	568.0
122.5°	612.2	612.4	612.6	612.8
125°	653.2	653.6	653.9	654.3
127.5°	696.1	695.7	695.3	695.0
130°	735.1	734.8	734.4	734.0
132.5°	771.5	770.9	770.4	769.8
135°	808.1	807.5	807.0	806.5
137.5°	842.5	842.2	841.8	841.5
140°	873.5	873.1	872.7	872.4
142.5°	902.5	901.9	901.4	900.9
145°	930.2	930.2	930.2	930.2
147.5°	954.0	953.1	952.2	951.3
150°	977.4	976.8	976.3	975.7
152.5°	998.0	997.1	996.2	995.3
155°	1016.4	1015.3	1014.3	1013.2
157.5°	1033.0	1031.5	1030.1	1028.6
160°	1047.1	1045.8	1044.5	1043.3
162.5°	1060.4	1059.3	1058.2	1057.1
165°	1071.5	1070.2	1069.0	1067.7
167.5°	1080.2	1078.7	1077.3	1075.8
170°	1087.5	1086.0	1084.6	1083.2
172.5°	1092.1	1090.5	1088.8	1087.2
175°	1095.6	1094.2	1092.7	1091.3
177.5°	1097.5	1095.7	1093.9	1092.1
180°	1095.4	1095.4	1095.4	1095.4



TEST NUMBER: P831060

CATALOG NUMBER: S123DIP-S1000D1025U930-4F0-1E-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	15.05	15.90	15.99	16.85	18.08	17.28	18.13	18.22	19.09	20.32
	3H	16.69	17.46	17.65	18.42	19.67	18.71	19.47	19.66	20.43	21.68
	4H	17.27	17.99	18.24	18.95	20.22	19.16	19.88	20.12	20.84	22.11
	6H	17.64	18.30	18.62	19.27	20.55	19.43	20.10	20.41	21.07	22.34
	8H	17.74	18.37	18.72	19.35	20.63	19.50	20.13	20.48	21.11	22.39
	12H	17.78	18.38	18.77	19.36	20.66	19.52	20.11	20.50	21.09	22.39
4H	2H	15.62	16.34	16.59	17.31	18.57	17.45	18.17	18.42	19.13	20.39
	3H	17.45	18.05	18.43	19.04	20.32	19.07	19.66	20.04	20.66	21.94
	4H	18.15	18.69	19.14	19.68	20.98	19.65	20.20	20.64	21.18	22.48
	6H	18.62	19.09	19.62	20.10	21.40	20.05	20.52	21.05	21.53	22.83
	8H	18.76	19.20	19.76	20.20	21.52	20.16	20.60	21.17	21.61	22.92
	12H	18.83	19.22	19.84	20.24	21.56	20.21	20.60	21.23	21.62	22.94
8H	4H	18.41	18.85	19.41	19.86	21.17	19.75	20.19	20.75	21.20	22.51
	6H	19.00	19.36	20.03	20.41	21.72	20.26	20.62	21.28	21.66	22.98
	8H	19.21	19.53	20.24	20.56	21.89	20.44	20.75	21.47	21.79	23.12
	12H	19.33	19.61	20.37	20.64	22.01	20.54	20.82	21.57	21.84	23.22
12H	4H	18.41	18.81	19.43	19.83	21.15	19.73	20.12	20.75	21.14	22.46
	6H	19.05	19.37	20.09	20.40	21.73	20.27	20.59	21.30	21.62	22.95
	8H	19.29	19.57	20.32	20.59	21.97	20.47	20.75	21.51	21.78	23.15