

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: P831115

Luminaire Tested: S123DIP-S1000D365U930-4F0-1E-UDD-G1

Issue Date: 05/03/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P831115  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2301-905-1, G3-1807-864-9)  
Test Lab: INNOVATION CENTER  
Issue Date: 05/03/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123DIP-S1000D365U930-4F0-1E-UDD-G1  
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 1000 LUMENS PER FOOT, GRAZE OPTIC  
UPLIGHT 365 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: -

**Summary**

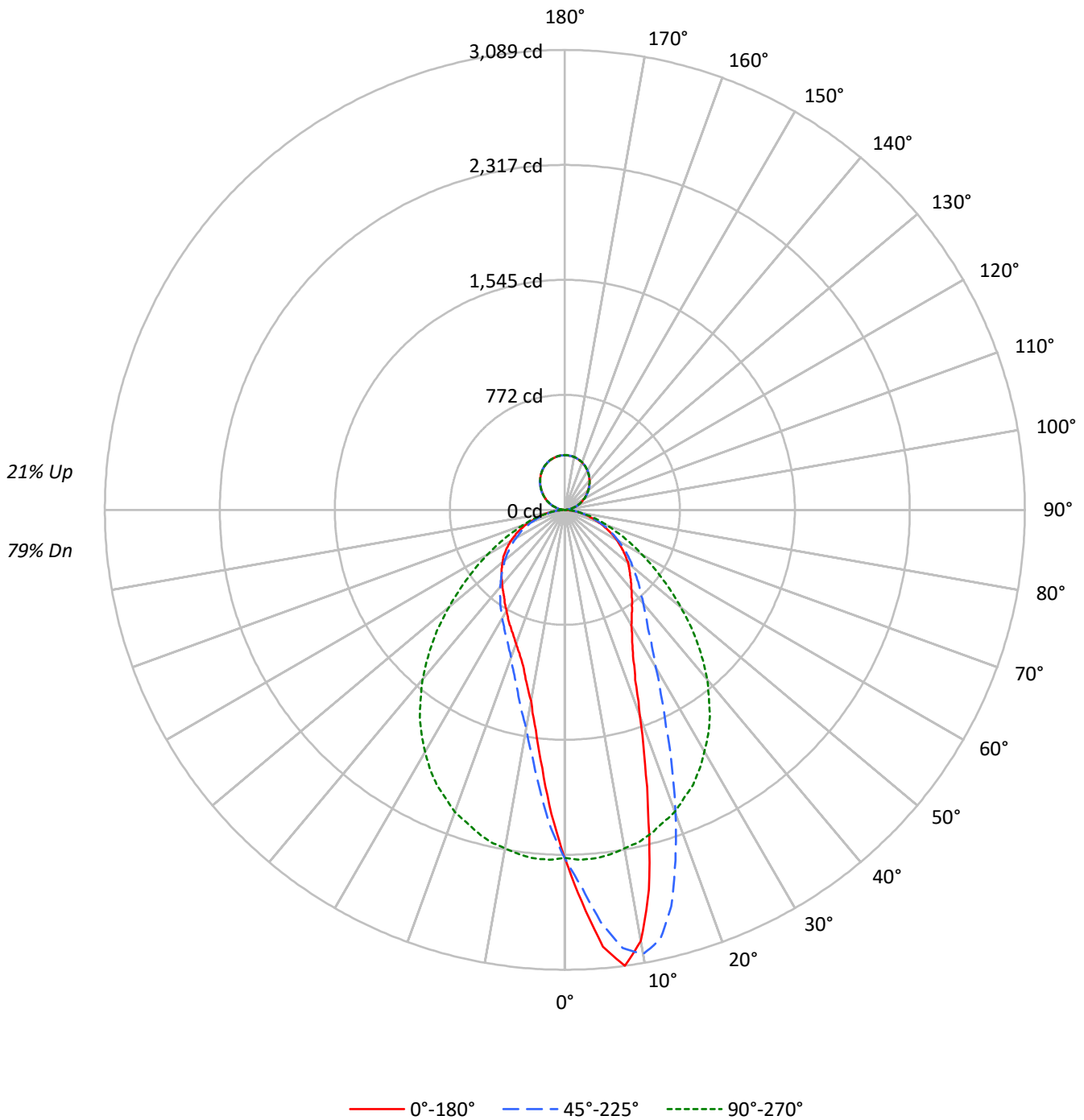
Lumens per Lamp: N/A  
Luminaire Lumens: 4775.7 lumens  
Efficiency: N/A  
Efficacy: 105.9 lumens/watt  
Spacing Criteria (0/90/45): 0.65 / 1.19 / 0.89  
Luminous Opening: Rectangular (W 4' x L: 0.25' x H: 0')  
CIE Type: Semi-Direct

Input Watts (W): 45.1  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT

TEST NUMBER: P831115

CATALOG NUMBER: S123DIP-S1000D365U930-4F0-1E-UDD-G1

### Luminous Intensity Polar Plot





TEST NUMBER: P831115

CATALOG NUMBER: S123DIP-S1000D365U930-4F0-1E-UDD-G1

**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20									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	50	30	10	50	30	10	50	30	10	0																
RCR																																														
0	114	114	114	114	109	109	109	109	99	99	99	91	91	91	82	82	82	79																												
1	105	101	97	94	100	96	93	90	88	86	83	81	79	77	74	73	71	68																												
2	96	89	83	78	92	85	80	75	79	74	71	72	69	66	66	64	61	58																												
3	89	79	72	66	84	76	70	64	70	65	61	65	61	57	60	56	53	51																												
4	82	71	63	57	78	68	61	56	63	57	53	59	54	50	54	50	47	44																												
5	76	64	56	50	72	62	54	49	57	51	46	53	48	44	49	45	42	39																												
6	70	58	50	44	67	56	49	43	52	46	41	49	43	39	45	41	38	35																												
7	65	53	45	40	63	51	44	39	48	42	37	45	40	36	42	37	34	32																												
8	61	49	41	36	59	47	40	35	44	38	34	42	36	32	39	34	31	29																												
9	57	45	38	33	55	44	37	32	41	35	31	39	33	30	36	32	28	27																												
10	54	42	35	30	52	41	34	29	38	32	28	36	31	27	34	29	26	24																												

**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



TEST NUMBER: P831115

CATALOG NUMBER: S123DIP-S1000D365U930-4F0-1E-UDD-G1

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	221.1	4.6
10°-20°	549.9	11.5
20°-30°	651.1	13.6
30°-40°	654.7	13.7
40°-50°	600.7	12.6
50°-60°	495.8	10.4
60°-70°	350.7	7.3
70°-80°	187.2	3.9
80°-90°	48.3	1.0
90°-100°	23.6	0.5
100°-110°	71.5	1.5
110°-120°	121.7	2.5
120°-130°	160.0	3.4
130°-140°	179.9	3.8
140°-150°	176.9	3.7
150°-160°	148.9	3.1
160°-170°	99.1	2.1
170°-180°	34.7	0.7
0°-30°	1422.1	29.8
0°-40°	2076.8	43.5
0°-60°	3173.3	66.4
0°-90°	3759.5	78.7
90°-120°	216.7	4.5
90°-150°	733.5	15.4
90°-180°	1016.0	21.3
0°-180°	4775.7	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°	9	7	0	7	9	6
95°	22	21	17	21	22	23
105°	69	68	65	68	69	73
115°	123	123	122	123	123	122
125°	177	180	179	180	177	158
135°	232	234	232	234	232	179
145°	282	284	282	284	282	176
155°	322	323	323	323	322	149
165°	351	351	352	351	351	99
175°	364	365	366	365	364	35
180°	367	367	367	367	367	



TEST NUMBER: P831115

CATALOG NUMBER: S123DIP-S1000D365U930-4F0-1E-UDD-G1

**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°	8.6	8.5	8.4	8.3	8.1	7.9	7.7	7.4	7.2	6.9	6.1
92.5°	12.4	12.5	12.6	12.8	12.9	12.9	12.7	12.5	12.3	12.1	11.7
95°	22.5	22.5	22.5	22.5	22.5	22.3	22.1	21.8	21.6	21.3	20.8
97.5°	32.3	32.3	32.4	32.5	32.5	32.4	32.1	31.8	31.4	31.1	30.7
100°	43.8	43.7	43.5	43.4	43.3	43.1	42.9	42.7	42.5	42.4	42.0
102.5°	55.6	55.7	55.7	55.8	55.9	55.8	55.6	55.4	55.2	55.0	54.6
105°	68.6	68.4	68.3	68.2	68.1	68.0	68.0	68.0	68.0	68.0	67.4
107.5°	81.8	81.9	82.0	82.0	82.1	82.0	81.8	81.6	81.4	81.2	81.0
110°	95.4	95.5	95.6	95.8	95.9	95.8	95.6	95.3	95.0	94.8	94.7



TEST NUMBER: P831115

CATALOG NUMBER: S123DIP-S1000D365U930-4F0-1E-UDD-G1

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	109.8	109.8	109.8	109.8	109.8	109.6	109.3	109.0	108.7	108.3	108.3
115°	122.7	122.8	122.9	122.9	123.0	123.0	122.9	122.9	122.8	122.7	122.9
117.5°	136.0	136.2	136.4	136.6	136.8	136.9	136.9	136.9	136.9	136.9	137.0
120°	150.1	150.2	150.4	150.5	150.6	150.7	150.8	150.8	150.9	151.0	151.3
122.5°	163.7	163.8	164.0	164.2	164.4	164.6	164.8	165.0	165.2	165.4	165.5
125°	177.2	177.4	177.7	178.0	178.2	178.5	178.7	179.0	179.2	179.5	179.6
127.5°	190.7	191.0	191.2	191.5	191.8	192.1	192.5	192.8	193.2	193.6	193.7
130°	204.0	204.4	204.9	205.3	205.8	206.1	206.4	206.6	206.9	207.2	207.3
132.5°	217.8	218.1	218.5	218.8	219.1	219.4	219.7	220.1	220.4	220.7	220.8
135°	232.2	232.4	232.5	232.6	232.7	232.9	233.2	233.4	233.7	234.0	234.0
137.5°	244.9	245.1	245.3	245.5	245.7	245.9	246.2	246.6	246.9	247.2	247.0
140°	257.3	257.7	258.2	258.6	259.1	259.3	259.4	259.5	259.5	259.6	259.5
142.5°	270.0	270.3	270.6	270.9	271.2	271.4	271.5	271.6	271.6	271.7	271.6
145°	282.1	282.3	282.6	282.8	283.1	283.3	283.3	283.4	283.4	283.5	283.3
147.5°	293.0	293.4	293.8	294.2	294.6	294.7	294.7	294.7	294.7	294.7	294.6
150°	303.4	303.8	304.2	304.5	304.9	305.1	305.1	305.1	305.1	305.1	305.0
152.5°	313.5	313.8	314.1	314.4	314.8	314.9	314.7	314.6	314.5	314.3	314.3
155°	322.4	322.9	323.3	323.7	324.2	324.3	324.0	323.8	323.5	323.3	323.2
157.5°	330.8	331.1	331.5	331.9	332.3	332.4	332.1	331.8	331.6	331.3	331.3
160°	338.8	339.1	339.3	339.6	339.9	339.8	339.5	339.2	338.9	338.5	338.5
162.5°	344.9	345.3	345.8	346.2	346.7	346.7	346.4	346.1	345.8	345.5	345.4
165°	350.6	351.1	351.5	352.0	352.4	352.5	352.1	351.7	351.3	350.9	350.9
167.5°	355.8	356.2	356.6	357.0	357.4	357.4	357.0	356.6	356.2	355.8	355.8
170°	359.6	360.0	360.5	360.9	361.4	361.4	360.9	360.5	360.0	359.6	359.6
172.5°	362.5	362.9	363.4	363.8	364.2	364.3	363.9	363.5	363.1	362.7	362.7
175°	364.5	364.9	365.4	365.8	366.3	366.3	365.9	365.5	365.1	364.8	364.8
177.5°	365.6	366.1	366.5	367.0	367.4	367.4	367.1	366.7	366.3	365.9	365.9
180°	366.8	366.8	366.8	366.8	366.8	366.8	366.8	366.8	366.8	366.8	366.8

TEST NUMBER: P831115

CATALOG NUMBER: S123DIP-S1000D365U930-4F0-1E-UDD-G1

**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°	5.3	4.4	3.6	2.8	2.2	1.6	0.9	0.3	0.9	1.6	2.2
92.5°	11.3	10.9	10.6	10.2	9.8	9.4	9.0	8.6	9.0	9.4	9.8
95°	20.3	19.8	19.3	18.8	18.3	17.9	17.4	17.0	17.4	17.9	18.3
97.5°	30.3	30.0	29.6	29.2	28.9	28.6	28.3	27.9	28.3	28.6	28.9
100°	41.7	41.4	41.1	40.7	40.3	40.0	39.6	39.2	39.6	40.0	40.3
102.5°	54.1	53.7	53.2	52.9	52.7	52.5	52.3	52.1	52.3	52.5	52.7
105°	66.8	66.3	65.7	65.3	65.2	65.1	65.0	64.8	65.0	65.1	65.2
107.5°	80.7	80.5	80.2	80.1	80.0	79.9	79.9	79.8	79.9	79.9	80.0
110°	94.5	94.4	94.3	94.2	94.0	93.9	93.8	93.6	93.8	93.9	94.0





TEST NUMBER: P831115

CATALOG NUMBER: S123DIP-S1000D365U930-4F0-1E-UDD-G1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	108.3	108.3	108.3	108.3	108.2	108.2	108.1	108.0	108.1	108.2	108.2
115°	123.0	123.1	123.3	123.2	123.0	122.8	122.6	122.5	122.6	122.8	123.0
117.5°	137.1	137.2	137.4	137.4	137.3	137.3	137.2	137.1	137.2	137.3	137.3
120°	151.6	151.9	152.3	152.2	151.8	151.5	151.1	150.7	151.1	151.5	151.8
122.5°	165.6	165.8	165.9	165.8	165.6	165.3	165.1	164.8	165.1	165.3	165.6
125°	179.8	179.9	180.0	180.0	179.8	179.6	179.4	179.2	179.4	179.6	179.8
127.5°	193.9	194.0	194.1	194.0	193.6	193.2	192.8	192.5	192.8	193.2	193.6
130°	207.5	207.7	207.9	207.8	207.3	206.7	206.2	205.7	206.2	206.7	207.3
132.5°	221.0	221.1	221.2	221.0	220.5	220.0	219.5	219.0	219.5	220.0	220.5
135°	234.1	234.1	234.2	234.0	233.7	233.3	232.9	232.5	232.9	233.3	233.7
137.5°	246.8	246.6	246.4	246.2	245.9	245.5	245.2	244.9	245.2	245.5	245.9
140°	259.5	259.4	259.3	259.1	258.8	258.5	258.2	257.9	258.2	258.5	258.8
142.5°	271.4	271.3	271.2	271.0	270.6	270.3	270.0	269.7	270.0	270.3	270.6
145°	283.1	282.9	282.7	282.6	282.5	282.3	282.2	282.1	282.2	282.3	282.5
147.5°	294.4	294.2	294.0	293.8	293.5	293.2	293.0	292.7	293.0	293.2	293.5
150°	304.9	304.7	304.6	304.5	304.3	304.2	304.1	304.0	304.1	304.2	304.3
152.5°	314.2	314.1	314.1	314.0	313.8	313.6	313.4	313.2	313.4	313.6	313.8
155°	323.1	323.1	323.0	323.0	323.0	323.0	323.0	323.0	323.0	323.0	323.0
157.5°	331.2	331.1	331.1	331.1	331.1	331.2	331.3	331.3	331.3	331.2	331.1
160°	338.5	338.5	338.5	338.6	338.7	338.9	339.0	339.1	339.0	338.9	338.7
162.5°	345.3	345.3	345.2	345.3	345.5	345.6	345.8	346.0	345.8	345.6	345.5
165°	350.9	350.9	350.9	351.0	351.2	351.4	351.6	351.8	351.6	351.4	351.2
167.5°	355.7	355.6	355.6	355.7	355.9	356.2	356.4	356.7	356.4	356.2	355.9
170°	359.6	359.6	359.6	359.7	360.0	360.2	360.5	360.7	360.5	360.2	360.0
172.5°	362.7	362.7	362.7	362.9	363.1	363.4	363.6	363.9	363.6	363.4	363.1
175°	364.8	364.8	364.8	364.9	365.1	365.4	365.7	365.9	365.7	365.4	365.1
177.5°	365.9	365.9	365.9	366.0	366.3	366.6	366.8	367.1	366.8	366.6	366.3
180°	366.8	366.8	366.8	366.8	366.8	366.8	366.8	366.8	366.8	366.8	366.8



TEST NUMBER: P831115

CATALOG NUMBER: S123DIP-S1000D365U930-4F0-1E-UDD-G1

**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°	2.8	3.6	4.4	5.3	6.1	6.9	7.2	7.4	7.7	7.9	8.1
92.5°	10.2	10.6	10.9	11.3	11.7	12.1	12.3	12.5	12.7	12.9	12.9
95°	18.8	19.3	19.8	20.3	20.8	21.3	21.6	21.8	22.1	22.3	22.5
97.5°	29.2	29.6	30.0	30.3	30.7	31.1	31.4	31.8	32.1	32.4	32.5
100°	40.7	41.1	41.4	41.7	42.0	42.4	42.5	42.7	42.9	43.1	43.3
102.5°	52.9	53.2	53.7	54.1	54.6	55.0	55.2	55.4	55.6	55.8	55.9
105°	65.3	65.7	66.3	66.8	67.4	68.0	68.0	68.0	68.0	68.0	68.1
107.5°	80.1	80.2	80.5	80.7	81.0	81.2	81.4	81.6	81.8	82.0	82.1
110°	94.2	94.3	94.4	94.5	94.7	94.8	95.0	95.3	95.6	95.8	95.9



TEST NUMBER: P831115

CATALOG NUMBER: S123DIP-S1000D365U930-4F0-1E-UDD-G1

**CANDELA DISTRIBUTION (continued):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	108.3	108.3	108.3	108.3	108.3	108.3	108.7	109.0	109.3	109.6	109.8
115°	123.2	123.3	123.1	123.0	122.9	122.7	122.8	122.9	122.9	123.0	123.0
117.5°	137.4	137.4	137.2	137.1	137.0	136.9	136.9	136.9	136.9	136.9	136.8
120°	152.2	152.3	151.9	151.6	151.3	151.0	150.9	150.8	150.8	150.7	150.6
122.5°	165.8	165.9	165.8	165.6	165.5	165.4	165.2	165.0	164.8	164.6	164.4
125°	180.0	180.0	179.9	179.8	179.6	179.5	179.2	179.0	178.7	178.5	178.2
127.5°	194.0	194.1	194.0	193.9	193.7	193.6	193.2	192.8	192.5	192.1	191.8
130°	207.8	207.9	207.7	207.5	207.3	207.2	206.9	206.6	206.4	206.1	205.8
132.5°	221.0	221.2	221.1	221.0	220.8	220.7	220.4	220.1	219.7	219.4	219.1
135°	234.0	234.2	234.1	234.1	234.0	234.0	233.7	233.4	233.2	232.9	232.7
137.5°	246.2	246.4	246.6	246.8	247.0	247.2	246.9	246.6	246.2	245.9	245.7
140°	259.1	259.3	259.4	259.5	259.5	259.6	259.5	259.5	259.4	259.3	259.1
142.5°	271.0	271.2	271.3	271.4	271.6	271.7	271.6	271.6	271.5	271.4	271.2
145°	282.6	282.7	282.9	283.1	283.3	283.5	283.4	283.4	283.3	283.3	283.1
147.5°	293.8	294.0	294.2	294.4	294.6	294.7	294.7	294.7	294.7	294.7	294.6
150°	304.5	304.6	304.7	304.9	305.0	305.1	305.1	305.1	305.1	305.1	304.9
152.5°	314.0	314.1	314.1	314.2	314.3	314.3	314.5	314.6	314.7	314.9	314.8
155°	323.0	323.0	323.1	323.1	323.2	323.3	323.5	323.8	324.0	324.3	324.2
157.5°	331.1	331.1	331.1	331.2	331.3	331.3	331.6	331.8	332.1	332.4	332.3
160°	338.6	338.5	338.5	338.5	338.5	338.5	338.9	339.2	339.5	339.8	339.9
162.5°	345.3	345.2	345.3	345.3	345.4	345.5	345.8	346.1	346.4	346.7	346.7
165°	351.0	350.9	350.9	350.9	350.9	350.9	351.3	351.7	352.1	352.5	352.4
167.5°	355.7	355.6	355.6	355.7	355.8	355.8	356.2	356.6	357.0	357.4	357.4
170°	359.7	359.6	359.6	359.6	359.6	359.6	360.0	360.5	360.9	361.4	361.4
172.5°	362.9	362.7	362.7	362.7	362.7	362.7	363.1	363.5	363.9	364.3	364.2
175°	364.9	364.8	364.8	364.8	364.8	364.8	365.1	365.5	365.9	366.3	366.3
177.5°	366.0	365.9	365.9	365.9	365.9	365.9	366.3	366.7	367.1	367.4	367.4
180°	366.8	366.8	366.8	366.8	366.8	366.8	366.8	366.8	366.8	366.8	366.8



TEST NUMBER: P831115

CATALOG NUMBER: S123DIP-S1000D365U930-4F0-1E-UDD-G1

**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°	8.3	8.4	8.5	8.6
92.5°	12.8	12.6	12.5	12.4
95°	22.5	22.5	22.5	22.5
97.5°	32.5	32.4	32.3	32.3
100°	43.4	43.5	43.7	43.8
102.5°	55.8	55.7	55.7	55.6
105°	68.2	68.3	68.4	68.6
107.5°	82.0	82.0	81.9	81.8
110°	95.8	95.6	95.5	95.4



TEST NUMBER: P831115

CATALOG NUMBER: S123DIP-S1000D365U930-4F0-1E-UDD-G1

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
112.5°	109.8	109.8	109.8	109.8
115°	122.9	122.9	122.8	122.7
117.5°	136.6	136.4	136.2	136.0
120°	150.5	150.4	150.2	150.1
122.5°	164.2	164.0	163.8	163.7
125°	178.0	177.7	177.4	177.2
127.5°	191.5	191.2	191.0	190.7
130°	205.3	204.9	204.4	204.0
132.5°	218.8	218.5	218.1	217.8
135°	232.6	232.5	232.4	232.2
137.5°	245.5	245.3	245.1	244.9
140°	258.6	258.2	257.7	257.3
142.5°	270.9	270.6	270.3	270.0
145°	282.8	282.6	282.3	282.1
147.5°	294.2	293.8	293.4	293.0
150°	304.5	304.2	303.8	303.4
152.5°	314.4	314.1	313.8	313.5
155°	323.7	323.3	322.9	322.4
157.5°	331.9	331.5	331.1	330.8
160°	339.6	339.3	339.1	338.8
162.5°	346.2	345.8	345.3	344.9
165°	352.0	351.5	351.1	350.6
167.5°	357.0	356.6	356.2	355.8
170°	360.9	360.5	360.0	359.6
172.5°	363.8	363.4	362.9	362.5
175°	365.8	365.4	364.9	364.5
177.5°	367.0	366.5	366.1	365.6
180°	366.8	366.8	366.8	366.8



TEST NUMBER: P831115

CATALOG NUMBER: S123DIP-S1000D365U930-4F0-1E-UDD-G1

**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	17.14	18.26	17.81	18.95	19.74	19.37	20.50	20.04	21.18	21.98
	3H	18.80	19.81	19.49	20.51	21.33	20.82	21.83	21.50	22.52	23.35
	4H	19.39	20.34	20.10	21.05	21.89	21.28	22.23	21.98	22.93	23.78
	6H	19.77	20.65	20.49	21.37	22.22	21.57	22.44	22.28	23.16	24.01
	8H	19.88	20.71	20.61	21.45	22.31	21.64	22.47	22.36	23.21	24.06
	12H	19.93	20.73	20.67	21.46	22.34	21.66	22.46	22.40	23.19	24.07
4H	2H	17.74	18.69	18.45	19.40	20.24	19.57	20.52	20.27	21.22	22.06
	3H	19.59	20.38	20.31	21.13	21.99	21.21	22.00	21.93	22.74	23.60
	4H	20.30	21.02	21.04	21.76	22.65	21.80	22.52	22.54	23.26	24.15
	6H	20.79	21.41	21.54	22.18	23.08	22.22	22.84	22.98	23.61	24.51
	8H	20.93	21.51	21.69	22.28	23.19	22.34	22.92	23.10	23.68	24.59
	12H	21.01	21.53	21.79	22.32	23.23	22.39	22.91	23.17	23.70	24.62
8H	4H	20.59	21.17	21.34	21.93	22.84	21.93	22.51	22.69	23.27	24.18
	6H	21.18	21.66	21.97	22.47	23.38	22.44	22.92	23.23	23.72	24.64
	8H	21.39	21.82	22.19	22.63	23.55	22.62	23.04	23.42	23.85	24.78
	12H	21.53	21.90	22.33	22.70	23.69	22.73	23.11	23.53	23.90	24.89
12H	4H	20.60	21.12	21.38	21.91	22.82	21.91	22.43	22.69	23.22	24.14
	6H	21.24	21.66	22.04	22.47	23.40	22.45	22.88	23.25	23.69	24.61
	8H	21.48	21.86	22.28	22.65	23.64	22.67	23.04	23.47	23.84	24.82