

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: P831047

Luminaire Tested: S123DIP-S1000D1025U830-4F0-1E-UDD-G4

Issue Date: 05/03/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P831047  
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-S1000D1025U830-4F0-1E-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: -

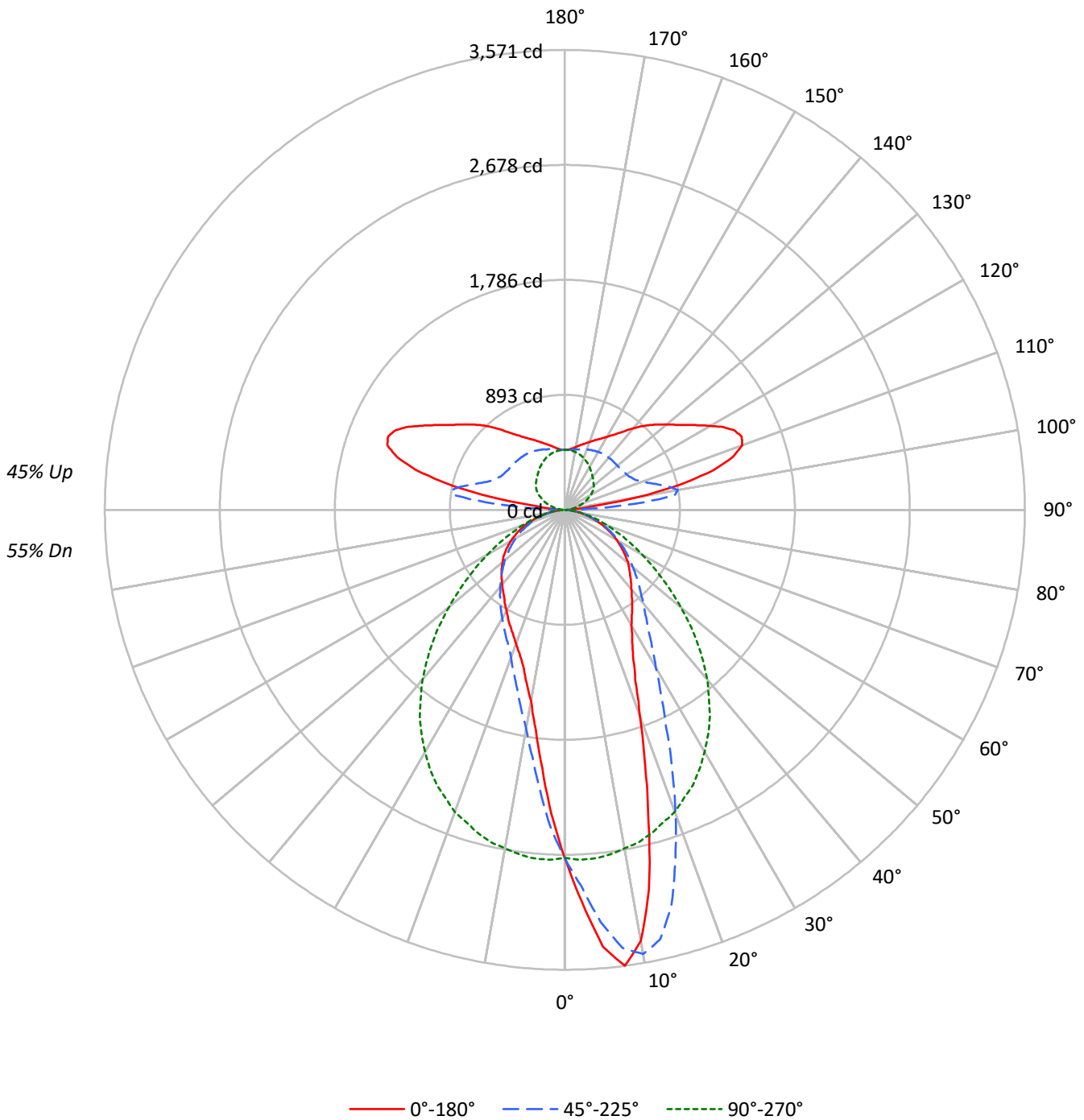
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7843.9 lumens  
Efficiency: N/A  
Efficacy: 128.6 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				
RC	80					70					50					30				
RW	70	50	30	10	70	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°	29096	29096	29096	29096	29096
5°	36798	34731	29356	23658	21740
10°	37154	38278	29161	18859	16479
15°	27984	35539	28962	15970	13936
20°	19498	28758	28593	13966	12659
25°	14867	22116	27962	12849	11873
30°	12862	17571	26956	12059	11241
35°	11934	14834	25796	11489	10796
40°	11297	13307	24164	10946	10645
45°	10922	12317	22092	10520	10578
50°	10734	11531	19639	10134	10523
55°	10335	10958	17231	9770	10569
60°	9965	10342	14852	9425	10396
65°	9360	9760	12811	9057	10190
70°	8645	9020	10895	8447	9593
75°	7827	8085	9337	7852	8763
80°	6453	7073	7389	6843	7389
85°	5113	5730	5422	5805	5891

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 80°  
 Vertical Angle: 45°  
 Luminance: 25224 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	255.6	3.3
10°-20°	635.8	8.1
20°-30°	752.8	9.6
30°-40°	756.9	9.6
40°-50°	694.4	8.9
50°-60°	573.2	7.3
60°-70°	405.4	5.2
70°-80°	216.4	2.8
80°-90°	57.5	0.7
90°-100°	252.2	3.2
100°-110°	738.4	9.4
110°-120°	721.0	9.2
120°-130°	574.2	7.3
130°-140°	453.1	5.8
140°-150°	338.0	4.3
150°-160°	235.7	3.0
160°-170°	138.4	1.8
170°-180°	45.0	0.6
0°-30°	1644.1	21.0
0°-40°	2401.0	30.6
0°-60°	3668.6	46.8
0°-90°	4347.9	55.4
90°-120°	1711.6	21.8
90°-150°	3076.9	39.2
90°-180°	3496.0	44.6
0°-180°	7843.9	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	2703	2703	2703	2703	2703	
5°	3406	3214	2717	2190	2012	324
15°	2511	3189	2599	1433	1251	694
25°	1252	1862	2354	1082	1000	591
35°	908	1129	1963	874	822	571
45°	718	809	1451	691	695	556
55°	551	584	918	521	563	493
65°	368	383	503	356	400	365
75°	188	194	224	189	211	198
85°	41	46	44	47	48	46
90°	27	24	2	24	27	17
95°	109	558	32	558	109	177
105°	1197	756	109	756	1197	1194
115°	1456	579	193	579	1456	1419
125°	1148	540	268	540	1148	1039
135°	930	532	314	532	930	722
145°	727	526	358	526	727	462
155°	603	509	407	509	603	281
165°	526	487	445	487	526	150
175°	473	468	464	468	473	46
180°	465	465	465	465	465	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	2703.1	2703.1	2703.1	2703.1	2703.1	2703.1	2703.1	2703.1	2703.1	2703.1	2703.1
2.5°	3046.8	3043.7	3040.5	3024.9	3009.2	3001.7	2994.1	2971.6	2949.0	2923.9	2898.8
5°	3405.6	3414.3	3423.1	3413.1	3403.1	3372.3	3341.6	3300.8	3260.1	3214.3	3168.5
7.5°	3571.1	3576.2	3581.2	3574.9	3568.6	3560.5	3552.3	3515.9	3479.6	3432.5	3385.5
10°	3399.3	3410.6	3421.9	3446.3	3470.8	3498.4	3526.0	3521.0	3515.9	3502.1	3488.4
12.5°	3021.7	3035.5	3049.3	3098.2	3147.2	3209.9	3272.6	3326.5	3380.5	3418.1	3455.7
15°	2511.2	2549.5	2587.7	2632.3	2676.8	2769.0	2861.2	2974.7	3088.2	3189.2	3290.2
17.5°	2068.4	2082.9	2097.3	2144.9	2192.6	2308.6	2424.7	2555.7	2686.8	2854.3	3021.7
20°	1702.2	1715.3	1728.5	1791.2	1853.9	1944.9	2035.8	2183.2	2330.6	2510.6	2690.6
22.5°	1430.0	1450.7	1471.4	1506.5	1541.6	1628.8	1716.0	1847.0	1978.1	2176.9	2375.7
25°	1251.8	1266.9	1281.9	1303.3	1324.6	1394.2	1463.8	1571.7	1679.6	1862.1	2044.6
27.5°	1130.2	1136.4	1142.7	1164.0	1185.4	1230.5	1275.7	1368.5	1461.3	1616.2	1771.1
30°	1034.8	1039.2	1043.6	1062.4	1081.3	1112.0	1142.7	1209.8	1276.9	1413.7	1550.4
32.5°	968.4	971.5	974.6	989.1	1003.5	1025.4	1047.4	1096.3	1145.2	1258.1	1371.0
35°	908.2	910.0	911.9	922.6	933.2	949.5	965.9	1002.9	1039.9	1128.9	1218.0
37.5°	855.5	858.0	860.5	866.8	873.0	887.5	901.9	931.4	960.8	1029.2	1097.6
40°	804.0	808.4	812.8	817.2	821.6	833.5	845.4	868.0	890.6	947.0	1003.5
42.5°	760.1	764.5	768.9	770.8	772.7	779.6	786.5	807.2	827.9	869.9	911.9
45°	717.5	719.4	721.3	723.1	725.0	730.7	736.3	754.5	772.7	809.1	845.4
47.5°	678.6	678.6	678.6	679.9	681.1	686.1	691.1	704.3	717.5	745.7	773.9
50°	641.0	641.0	641.0	639.1	637.2	640.3	643.5	653.5	663.6	688.6	713.7
52.5°	595.8	595.8	595.8	596.4	597.1	597.1	597.1	605.9	614.6	637.2	659.8
55°	550.7	553.2	555.7	553.8	551.9	553.2	554.4	560.1	565.7	583.9	602.1
57.5°	505.5	506.8	508.0	507.4	506.8	507.4	508.0	513.0	518.0	531.8	545.6
60°	462.9	462.9	462.9	461.6	460.3	461.6	462.9	465.4	467.9	480.4	493.0
62.5°	415.2	415.8	416.4	417.1	417.7	416.4	415.2	418.3	421.5	430.9	440.3
65°	367.5	368.2	368.8	370.7	372.5	371.3	370.0	373.2	376.3	383.2	390.1
67.5°	324.9	323.6	322.4	323.0	323.6	325.5	327.4	328.0	328.6	336.2	343.7
70°	274.7	276.0	277.2	276.6	276.0	276.6	277.2	279.1	281.0	286.6	292.3
72.5°	229.5	230.2	230.8	230.8	230.8	232.1	233.3	235.2	237.1	240.2	243.3
75°	188.2	188.2	188.2	189.4	190.7	191.3	191.9	191.9	191.9	194.4	196.9
77.5°	143.0	146.1	149.3	148.6	148.0	149.3	150.5	152.4	154.3	155.5	156.8
80°	104.1	104.1	104.1	104.7	105.4	107.2	109.1	110.4	111.6	114.1	116.7
82.5°	66.5	67.1	67.7	69.6	71.5	72.8	74.0	75.9	77.8	77.8	77.8
85°	41.4	40.1	38.9	40.1	41.4	42.6	43.9	44.5	45.2	46.4	47.7
87.5°	20.1	20.1	20.1	20.1	20.1	20.7	21.3	21.3	21.3	21.3	21.3
90°	27.3	28.2	27.3	26.3	27.3	25.4	24.5	23.5	22.6	23.5	20.7
92.5°	49.9	51.7	50.8	54.6	56.4	63.0	72.4	93.1	130.8	175.0	193.8
95°	109.1	112.9	119.5	128.0	145.8	179.7	229.6	338.7	452.5	557.9	496.8
97.5°	223.9	234.3	256.8	292.6	355.6	462.9	587.1	778.1	887.2	858.0	640.7
100°	589.9	589.0	625.6	694.3	789.4	923.0	1033.0	1109.2	1076.3	891.0	602.1
102.5°	934.2	961.5	990.7	1041.5	1110.2	1182.6	1235.3	1219.3	1085.7	829.8	545.7
105°	1196.7	1201.4	1231.5	1267.3	1310.6	1335.0	1317.2	1223.1	1026.4	756.4	501.5
107.5°	1368.0	1378.3	1390.5	1407.5	1413.1	1387.7	1314.3	1166.6	941.8	691.5	469.5
110°	1465.8	1467.7	1469.6	1462.0	1435.7	1369.8	1251.3	1078.2	862.7	637.9	452.5



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	1485.6	1484.6	1475.2	1447.9	1394.3	1304.9	1168.5	990.7	794.1	602.1	443.1
115°	1455.5	1450.8	1431.9	1390.5	1320.0	1217.4	1079.1	915.4	741.4	578.6	442.2
117.5°	1389.6	1383.0	1354.8	1308.7	1235.3	1129.0	1002.0	857.1	706.6	562.6	443.1
120°	1303.0	1297.4	1274.8	1222.1	1147.8	1052.8	939.9	812.9	680.2	552.3	446.9
122.5°	1222.1	1214.6	1189.2	1143.1	1079.1	992.6	890.0	778.1	658.6	545.7	453.5
125°	1147.8	1141.2	1117.7	1076.3	1016.1	940.8	850.5	748.0	640.7	540.0	460.1
127.5°	1083.8	1078.2	1056.5	1020.8	966.2	896.6	813.8	720.7	623.8	537.2	467.6
130°	1031.1	1023.6	1003.9	970.0	920.1	856.2	779.9	695.3	610.6	534.4	475.1
132.5°	979.4	974.7	957.8	923.9	877.8	817.6	748.0	671.7	598.4	533.4	480.8
135°	930.5	923.9	907.0	878.7	832.6	779.0	717.9	651.1	588.0	532.5	486.4
137.5°	878.7	873.1	859.0	829.8	790.3	742.3	687.7	631.3	578.6	530.6	490.2
140°	824.2	825.1	810.1	783.7	748.0	707.5	662.3	614.4	570.1	529.7	493.9
142.5°	773.4	774.3	761.1	738.5	709.4	675.5	637.9	598.4	562.6	527.8	496.8
145°	727.3	725.4	717.9	698.1	674.6	647.3	617.2	586.1	556.0	525.9	497.7
147.5°	687.7	686.8	679.3	665.2	646.3	626.6	601.2	575.8	549.4	523.1	497.7
150°	653.9	653.9	648.2	637.9	623.8	605.9	586.1	564.5	542.9	519.3	497.7
152.5°	625.6	625.6	622.8	613.4	603.1	589.0	572.0	554.1	535.3	514.6	494.9
155°	603.1	602.1	600.2	592.7	584.3	573.0	558.9	543.8	527.8	509.0	493.0
157.5°	581.4	581.4	579.5	573.9	566.4	557.0	545.7	532.5	519.3	504.3	490.2
160°	560.7	561.7	561.7	556.0	549.4	542.9	533.4	523.1	510.9	498.6	488.3
162.5°	541.9	542.9	542.9	538.2	534.4	528.7	520.3	511.8	502.4	493.0	484.5
165°	525.9	525.9	526.9	523.1	519.3	514.6	508.0	502.4	494.9	487.3	480.8
167.5°	509.9	509.9	510.9	508.0	506.2	502.4	498.6	493.9	487.3	481.7	477.0
170°	495.8	495.8	496.8	494.9	493.9	492.1	488.3	485.5	480.8	476.1	473.2
172.5°	482.6	483.6	485.5	483.6	483.6	482.6	479.8	477.9	474.2	471.4	470.4
175°	473.2	474.2	475.1	474.2	474.2	474.2	472.3	471.4	469.5	467.6	467.6
177.5°	466.6	466.6	468.5	467.6	468.5	468.5	467.6	466.6	465.7	464.8	465.7
180°	464.8	464.8	464.8	464.8	464.8	464.8	464.8	464.8	464.8	464.8	464.8



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	2703.1	2703.1	2703.1	2703.1	2703.1	2703.1	2703.1	2703.1	2703.1	2703.1	2703.1
2.5°	2891.3	2883.8	2856.2	2828.6	2797.2	2765.8	2742.6	2719.4	2684.9	2650.4	2622.2
5°	3133.4	3098.2	3039.9	2981.6	2902.6	2823.5	2770.2	2716.9	2645.4	2573.9	2516.9
7.5°	3325.3	3265.1	3183.5	3102.0	2998.5	2895.0	2797.2	2699.4	2590.2	2481.1	2392.0
10°	3447.6	3406.8	3312.7	3218.7	3080.1	2941.5	2804.7	2668.0	2527.5	2387.0	2269.1
12.5°	3459.5	3463.3	3376.7	3290.2	3133.4	2976.6	2810.4	2644.2	2467.3	2290.4	2153.1
15°	3354.8	3419.4	3371.7	3324.0	3166.0	3007.9	2803.5	2599.0	2395.2	2191.4	2032.7
17.5°	3160.3	3298.9	3305.8	3312.7	3154.7	2996.6	2770.2	2543.8	2313.0	2082.2	1915.4
20°	2895.0	3099.5	3169.7	3240.0	3111.4	2982.8	2739.5	2496.2	2237.8	1979.4	1804.4
22.5°	2624.1	2872.5	3001.0	3129.6	3034.3	2938.9	2679.9	2420.9	2148.1	1875.3	1697.8
25°	2315.5	2586.5	2784.0	2981.6	2923.3	2864.9	2609.7	2354.4	2064.0	1773.7	1592.4
27.5°	2046.5	2321.8	2560.1	2798.5	2785.9	2773.4	2520.0	2266.6	1969.3	1672.1	1497.1
30°	1806.9	2063.4	2330.0	2596.5	2627.2	2658.0	2413.4	2168.8	1870.9	1573.0	1404.2
32.5°	1594.9	1818.8	2104.8	2390.8	2451.0	2511.2	2290.4	2069.7	1774.9	1480.1	1317.7
35°	1421.2	1624.4	1910.4	2196.4	2271.6	2346.9	2155.0	1963.1	1675.8	1388.6	1233.7
37.5°	1267.5	1437.5	1716.6	1995.7	2087.9	2180.1	2008.2	1836.4	1567.3	1298.3	1155.9
40°	1140.2	1276.9	1533.4	1790.0	1896.6	2003.2	1861.5	1719.7	1464.5	1209.2	1078.1
42.5°	1033.6	1155.3	1387.9	1620.6	1722.9	1825.1	1705.3	1585.5	1358.5	1131.4	1011.6
45°	942.6	1039.9	1251.2	1462.6	1559.8	1657.0	1554.1	1451.3	1251.2	1051.1	939.5
47.5°	857.3	940.8	1121.4	1302.0	1388.6	1475.1	1394.8	1314.6	1145.2	975.9	874.9
50°	780.8	847.9	1006.0	1164.0	1239.3	1314.6	1243.7	1172.8	1033.6	894.4	806.5
52.5°	714.4	768.9	901.3	1033.6	1098.2	1162.8	1101.9	1041.1	930.7	820.3	743.8
55°	648.5	694.9	809.7	924.5	968.4	1012.3	965.2	918.2	829.1	740.1	675.5
57.5°	587.0	628.4	722.5	816.6	850.5	884.3	841.7	799.0	731.9	664.8	610.9
60°	526.8	560.7	639.1	717.5	738.2	758.9	724.4	689.9	642.9	595.8	547.5
62.5°	471.0	501.7	560.1	618.4	632.2	646.0	619.6	593.3	557.6	521.8	484.2
65°	413.3	436.5	484.2	531.8	540.6	549.4	526.2	503.0	476.0	449.1	421.5
67.5°	360.0	376.3	415.2	454.1	454.7	455.3	436.5	417.7	402.6	387.6	365.6
70°	307.9	323.6	349.3	375.1	375.7	376.3	361.3	346.2	334.9	323.6	307.3
72.5°	254.6	265.9	285.4	304.8	303.6	302.3	292.9	283.5	274.7	265.9	254.0
75°	206.3	215.7	228.9	242.1	238.3	234.6	229.5	224.5	217.0	209.5	202.0
77.5°	162.4	168.1	175.6	183.1	180.6	178.1	173.7	169.3	163.7	158.0	154.9
80°	119.2	121.7	126.7	131.7	130.5	129.2	124.2	119.2	117.9	116.7	112.3
82.5°	80.9	84.0	85.3	86.6	85.9	85.3	81.5	77.8	76.5	75.3	74.6
85°	48.3	48.9	49.5	50.2	48.3	46.4	45.2	43.9	43.9	43.9	43.3
87.5°	22.0	22.6	22.6	22.6	22.0	21.3	20.1	18.8	19.4	20.1	20.1
90°	17.9	15.1	12.2	10.3	8.5	5.6	3.8	1.9	3.8	5.6	8.5
92.5°	144.9	95.0	64.9	48.0	38.6	30.1	20.7	14.1	20.7	30.1	38.6
95°	342.5	202.3	122.3	85.6	61.2	45.2	34.8	32.0	34.8	45.2	61.2
97.5°	381.0	218.3	139.2	98.8	74.3	60.2	51.7	50.8	51.7	60.2	74.3
100°	354.7	215.4	149.6	112.9	90.3	77.1	70.6	69.6	70.6	77.1	90.3
102.5°	332.1	219.2	161.8	128.9	109.1	96.9	91.3	89.4	91.3	96.9	109.1
105°	323.6	226.7	175.9	146.8	128.9	117.6	112.0	109.1	112.0	117.6	128.9
107.5°	321.8	239.0	193.8	166.5	149.6	138.3	132.7	129.8	132.7	138.3	149.6
110°	326.5	255.0	212.6	186.3	170.3	159.9	155.2	152.4	155.2	159.9	170.3





TEST NUMBER: P831047

CATALOG NUMBER: S123DIP-S1000D1025U830-4F0-1E-UDD-G4

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	335.9	271.0	232.4	207.0	191.0	180.6	175.9	173.1	175.9	180.6	191.0
115°	346.2	288.8	253.1	227.7	211.7	202.3	196.6	192.9	196.6	202.3	211.7
117.5°	359.4	307.7	271.9	248.4	230.5	222.0	217.3	212.6	217.3	222.0	230.5
120°	374.4	325.5	291.7	268.1	250.3	240.9	236.1	233.3	236.1	240.9	250.3
122.5°	388.6	344.3	311.4	286.0	269.1	258.7	254.0	251.2	254.0	258.7	269.1
125°	403.6	362.2	329.3	303.9	286.0	275.7	270.0	268.1	270.0	275.7	286.0
127.5°	415.8	378.2	346.2	320.8	301.1	290.7	284.1	281.3	284.1	290.7	301.1
130°	428.1	392.3	361.3	335.9	316.1	304.8	296.4	293.5	296.4	304.8	316.1
132.5°	439.4	404.6	374.4	350.0	330.2	316.1	306.7	302.9	306.7	316.1	330.2
135°	448.8	416.8	387.6	362.2	342.5	328.3	318.0	314.2	318.0	328.3	342.5
137.5°	456.3	425.3	397.0	373.5	353.8	338.7	328.3	324.6	328.3	338.7	353.8
140°	461.9	433.7	406.4	382.9	364.1	349.0	339.6	334.9	339.6	349.0	364.1
142.5°	467.6	440.3	414.0	392.3	373.5	360.3	350.0	346.2	350.0	360.3	373.5
145°	471.4	446.0	421.5	399.9	383.9	369.7	361.3	358.5	361.3	369.7	383.9
147.5°	474.2	450.7	428.1	409.3	393.3	381.0	372.6	370.7	372.6	381.0	393.3
150°	475.1	455.4	433.7	416.8	403.6	391.4	383.9	382.9	383.9	391.4	403.6
152.5°	477.0	458.2	440.3	424.3	413.0	402.7	395.1	395.1	395.1	402.7	413.0
155°	477.0	461.9	446.0	432.8	422.4	413.0	407.4	407.4	407.4	413.0	422.4
157.5°	477.9	463.8	450.7	440.3	430.9	422.4	417.7	416.8	417.7	422.4	430.9
160°	477.9	466.6	455.4	446.0	439.4	431.8	428.1	428.1	428.1	431.8	439.4
162.5°	477.0	467.6	458.2	450.7	445.0	439.4	436.5	436.5	436.5	439.4	445.0
165°	475.1	468.5	461.0	454.4	450.7	446.0	444.1	445.0	444.1	446.0	450.7
167.5°	474.2	468.5	462.9	458.2	455.4	451.6	450.7	451.6	450.7	451.6	455.4
170°	471.4	467.6	462.9	461.0	459.1	456.3	455.4	457.2	455.4	456.3	459.1
172.5°	470.4	467.6	463.8	462.9	461.9	460.1	460.1	461.0	460.1	460.1	461.9
175°	468.5	466.6	464.8	463.8	463.8	461.9	462.9	463.8	462.9	461.9	463.8
177.5°	467.6	465.7	464.8	464.8	464.8	463.8	464.8	465.7	464.8	463.8	464.8
180°	464.8	464.8	464.8	464.8	464.8	464.8	464.8	464.8	464.8	464.8	464.8



TEST NUMBER: P831047

CATALOG NUMBER: S123DIP-S1000D1025U830-4F0-1E-UDD-G4

**CANDELA DISTRIBUTION (continued):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	2703.1	2703.1	2703.1	2703.1	2703.1	2703.1	2703.1	2703.1	2703.1	2703.1	2703.1
2.5°	2594.0	2569.5	2545.1	2526.3	2507.4	2475.5	2443.5	2436.0	2428.4	2417.8	2407.1
5°	2459.8	2399.6	2339.4	2285.4	2231.5	2189.5	2147.4	2119.9	2092.3	2072.2	2052.1
7.5°	2303.0	2212.7	2122.4	2058.4	1994.4	1933.6	1872.7	1853.3	1833.9	1807.5	1781.2
10°	2151.2	2051.5	1951.8	1868.4	1784.9	1725.4	1665.8	1641.9	1618.1	1584.9	1551.6
12.5°	2015.7	1906.6	1797.5	1713.4	1629.4	1571.7	1514.0	1479.5	1445.0	1426.2	1407.4
15°	1874.0	1757.3	1640.7	1562.9	1485.2	1433.1	1381.0	1350.9	1320.8	1302.6	1284.5
17.5°	1748.6	1633.2	1517.8	1443.1	1368.5	1320.8	1273.2	1246.8	1220.5	1206.7	1192.9
20°	1629.4	1516.5	1403.6	1330.9	1258.1	1219.2	1180.3	1163.4	1146.5	1135.2	1123.9
22.5°	1520.3	1409.3	1298.3	1236.2	1174.1	1142.7	1111.4	1099.4	1087.5	1078.1	1068.7
25°	1411.1	1312.1	1213.0	1160.3	1107.6	1081.9	1056.2	1044.2	1032.3	1022.9	1013.5
27.5°	1322.1	1227.4	1132.7	1087.5	1042.4	1022.3	1002.2	992.8	983.4	974.6	965.9
30°	1235.5	1150.9	1066.2	1027.3	988.4	970.2	952.1	942.6	933.2	925.1	916.9
32.5°	1155.3	1082.5	1009.8	974.0	938.3	923.2	908.2	896.9	885.6	879.3	873.0
35°	1078.7	1013.5	948.3	918.8	889.3	874.3	859.2	849.8	840.4	835.4	830.4
37.5°	1013.5	955.2	896.9	868.6	840.4	826.0	811.6	803.4	795.3	793.4	791.5
40°	947.0	896.9	846.7	819.1	791.5	779.0	766.4	761.4	756.4	755.1	753.9
42.5°	891.8	842.9	794.0	768.9	743.8	733.2	722.5	720.0	717.5	719.4	721.3
45°	827.9	787.1	746.3	723.1	699.9	691.1	682.4	680.5	678.6	682.4	686.1
47.5°	773.9	736.3	698.7	676.7	654.8	648.5	642.2	641.6	641.0	646.0	651.0
50°	718.7	682.4	646.0	628.4	610.9	605.2	599.6	601.5	603.3	611.5	619.6
52.5°	667.3	633.4	599.6	583.3	567.0	563.2	559.4	563.8	568.2	577.0	585.8
55°	610.9	580.1	549.4	536.9	524.3	520.6	516.8	525.6	534.4	542.5	550.7
57.5°	556.9	530.0	503.0	491.7	480.4	479.8	479.2	487.3	495.5	504.2	513.0
60°	499.2	476.7	454.1	445.3	436.5	437.8	439.0	448.4	457.8	464.7	471.6
62.5°	446.5	427.7	408.9	400.8	392.6	395.7	398.9	408.3	417.7	425.9	434.0
65°	393.9	378.2	362.5	356.9	351.2	355.6	360.0	368.2	376.3	382.0	387.6
67.5°	343.7	330.5	317.4	313.0	308.6	313.0	317.4	325.5	333.7	339.3	344.9
70°	291.0	280.3	269.7	266.5	263.4	268.4	273.4	280.3	287.2	292.9	298.5
72.5°	242.1	233.9	225.8	225.2	224.5	228.9	233.3	240.2	247.1	250.9	254.6
75°	194.4	190.0	185.6	185.0	184.4	188.8	193.2	196.9	200.7	203.8	207.0
77.5°	151.8	148.0	144.3	144.9	145.5	148.6	151.8	155.5	159.3	161.2	163.1
80°	107.9	106.6	105.4	106.6	107.9	110.4	112.9	115.4	117.9	119.2	120.4
82.5°	74.0	72.8	71.5	73.4	75.3	77.1	79.0	80.9	82.8	83.4	84.0
85°	42.6	44.5	46.4	46.4	46.4	47.0	47.7	48.3	48.9	48.3	47.7
87.5°	20.1	20.7	21.3	21.3	21.3	22.0	22.6	22.6	22.6	22.0	21.3
90°	10.3	12.2	15.1	17.9	20.7	23.5	22.6	23.5	24.5	25.4	27.3
92.5°	48.0	64.9	95.0	144.9	193.8	175.0	130.8	93.1	72.4	63.0	56.4
95°	85.6	122.3	202.3	342.5	496.8	557.9	452.5	338.7	229.6	179.7	145.8
97.5°	98.8	139.2	218.3	381.0	640.7	858.0	887.2	778.1	587.1	462.9	355.6
100°	112.9	149.6	215.4	354.7	602.1	891.0	1076.3	1109.2	1033.0	923.0	789.4
102.5°	128.9	161.8	219.2	332.1	545.7	829.8	1085.7	1219.3	1235.3	1182.6	1110.2
105°	146.8	175.9	226.7	323.6	501.5	756.4	1026.4	1223.1	1317.2	1335.0	1310.6
107.5°	166.5	193.8	239.0	321.8	469.5	691.5	941.8	1166.6	1314.3	1387.7	1413.1
110°	186.3	212.6	255.0	326.5	452.5	637.9	862.7	1078.2	1251.3	1369.8	1435.7



TEST NUMBER: P831047

CATALOG NUMBER: S123DIP-S1000D1025U830-4F0-1E-UDD-G4

**CANDELA DISTRIBUTION (continued):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	207.0	232.4	271.0	335.9	443.1	602.1	794.1	990.7	1168.5	1304.9	1394.3
115°	227.7	253.1	288.8	346.2	442.2	578.6	741.4	915.4	1079.1	1217.4	1320.0
117.5°	248.4	271.9	307.7	359.4	443.1	562.6	706.6	857.1	1002.0	1129.0	1235.3
120°	268.1	291.7	325.5	374.4	446.9	552.3	680.2	812.9	939.9	1052.8	1147.8
122.5°	286.0	311.4	344.3	388.6	453.5	545.7	658.6	778.1	890.0	992.6	1079.1
125°	303.9	329.3	362.2	403.6	460.1	540.0	640.7	748.0	850.5	940.8	1016.1
127.5°	320.8	346.2	378.2	415.8	467.6	537.2	623.8	720.7	813.8	896.6	966.2
130°	335.9	361.3	392.3	428.1	475.1	534.4	610.6	695.3	779.9	856.2	920.1
132.5°	350.0	374.4	404.6	439.4	480.8	533.4	598.4	671.7	748.0	817.6	877.8
135°	362.2	387.6	416.8	448.8	486.4	532.5	588.0	651.1	717.9	779.0	832.6
137.5°	373.5	397.0	425.3	456.3	490.2	530.6	578.6	631.3	687.7	742.3	790.3
140°	382.9	406.4	433.7	461.9	493.9	529.7	570.1	614.4	662.3	707.5	748.0
142.5°	392.3	414.0	440.3	467.6	496.8	527.8	562.6	598.4	637.9	675.5	709.4
145°	399.9	421.5	446.0	471.4	497.7	525.9	556.0	586.1	617.2	647.3	674.6
147.5°	409.3	428.1	450.7	474.2	497.7	523.1	549.4	575.8	601.2	626.6	646.3
150°	416.8	433.7	455.4	475.1	497.7	519.3	542.9	564.5	586.1	605.9	623.8
152.5°	424.3	440.3	458.2	477.0	494.9	514.6	535.3	554.1	572.0	589.0	603.1
155°	432.8	446.0	461.9	477.0	493.0	509.0	527.8	543.8	558.9	573.0	584.3
157.5°	440.3	450.7	463.8	477.9	490.2	504.3	519.3	532.5	545.7	557.0	566.4
160°	446.0	455.4	466.6	477.9	488.3	498.6	510.9	523.1	533.4	542.9	549.4
162.5°	450.7	458.2	467.6	477.0	484.5	493.0	502.4	511.8	520.3	528.7	534.4
165°	454.4	461.0	468.5	475.1	480.8	487.3	494.9	502.4	508.0	514.6	519.3
167.5°	458.2	462.9	468.5	474.2	477.0	481.7	487.3	493.9	498.6	502.4	506.2
170°	461.0	462.9	467.6	471.4	473.2	476.1	480.8	485.5	488.3	492.1	493.9
172.5°	462.9	463.8	467.6	470.4	470.4	471.4	474.2	477.9	479.8	482.6	483.6
175°	463.8	464.8	466.6	468.5	467.6	467.6	469.5	471.4	472.3	474.2	474.2
177.5°	464.8	464.8	465.7	467.6	465.7	464.8	465.7	466.6	467.6	468.5	468.5
180°	464.8	464.8	464.8	464.8	464.8	464.8	464.8	464.8	464.8	464.8	464.8



TEST NUMBER: P831047

CATALOG NUMBER: S123DIP-S1000D1025U830-4F0-1E-UDD-G4

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
0°	2703.1	2703.1	2703.1	2703.1
2.5°	2402.7	2398.3	2380.8	2363.2
5°	2037.1	2022.0	2017.0	2012.0
7.5°	1779.9	1778.7	1752.3	1726.0
10°	1553.5	1555.4	1531.6	1507.7
12.5°	1391.7	1376.0	1374.1	1372.3
15°	1270.0	1255.6	1253.1	1250.6
17.5°	1184.1	1175.3	1172.8	1170.3
20°	1118.9	1113.9	1109.5	1105.1
22.5°	1062.4	1056.2	1052.4	1048.6
25°	1007.9	1002.2	1001.0	999.7
27.5°	959.0	952.1	952.1	952.1
30°	912.5	908.2	906.3	904.4
32.5°	869.3	865.5	865.5	865.5
35°	828.5	826.6	824.1	821.6
37.5°	791.5	791.5	790.2	789.0
40°	755.7	757.6	757.6	757.6
42.5°	723.1	725.0	725.0	725.0
45°	689.3	692.4	693.7	694.9
47.5°	656.0	661.0	662.3	663.6
50°	623.4	627.2	627.8	628.4
52.5°	590.2	594.6	597.7	600.8
55°	555.1	559.4	561.3	563.2
57.5°	517.4	521.8	522.4	523.1
60°	476.0	480.4	481.7	482.9
62.5°	436.5	439.0	440.3	441.5
65°	391.4	395.1	397.6	400.1
67.5°	348.1	351.2	351.2	351.2
70°	299.8	301.0	302.9	304.8
72.5°	255.3	255.9	255.9	255.9
75°	208.2	209.5	210.1	210.7
77.5°	163.7	164.3	164.3	164.3
80°	119.8	119.2	119.2	119.2
82.5°	82.2	80.3	80.3	80.3
85°	47.0	46.4	47.0	47.7
87.5°	21.3	21.3	21.3	21.3
90°	26.3	27.3	28.2	27.3
92.5°	54.6	50.8	51.7	49.9
95°	128.0	119.5	112.9	109.1
97.5°	292.6	256.8	234.3	223.9
100°	694.3	625.6	589.0	589.9
102.5°	1041.5	990.7	961.5	934.2
105°	1267.3	1231.5	1201.4	1196.7
107.5°	1407.5	1390.5	1378.3	1368.0
110°	1462.0	1469.6	1467.7	1465.8



TEST NUMBER: P831047

CATALOG NUMBER: S123DIP-S1000D1025U830-4F0-1E-UDD-G4

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
112.5°	1447.9	1475.2	1484.6	1485.6
115°	1390.5	1431.9	1450.8	1455.5
117.5°	1308.7	1354.8	1383.0	1389.6
120°	1222.1	1274.8	1297.4	1303.0
122.5°	1143.1	1189.2	1214.6	1222.1
125°	1076.3	1117.7	1141.2	1147.8
127.5°	1020.8	1056.5	1078.2	1083.8
130°	970.0	1003.9	1023.6	1031.1
132.5°	923.9	957.8	974.7	979.4
135°	878.7	907.0	923.9	930.5
137.5°	829.8	859.0	873.1	878.7
140°	783.7	810.1	825.1	824.2
142.5°	738.5	761.1	774.3	773.4
145°	698.1	717.9	725.4	727.3
147.5°	665.2	679.3	686.8	687.7
150°	637.9	648.2	653.9	653.9
152.5°	613.4	622.8	625.6	625.6
155°	592.7	600.2	602.1	603.1
157.5°	573.9	579.5	581.4	581.4
160°	556.0	561.7	561.7	560.7
162.5°	538.2	542.9	542.9	541.9
165°	523.1	526.9	525.9	525.9
167.5°	508.0	510.9	509.9	509.9
170°	494.9	496.8	495.8	495.8
172.5°	483.6	485.5	483.6	482.6
175°	474.2	475.1	474.2	473.2
177.5°	467.6	468.5	466.6	466.6
180°	464.8	464.8	464.8	464.8



TEST NUMBER: P831047

CATALOG NUMBER: S123DIP-S1000D1025U830-4F0-1E-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	15.77	16.64	16.69	17.57	18.77	18.01	18.88	18.93	19.81	21.00
	3H	17.42	18.20	18.35	19.14	20.36	19.43	20.21	20.36	21.15	22.37
	4H	18.00	18.74	18.94	19.68	20.91	19.88	20.62	20.83	21.57	22.79
	6H	18.37	19.05	19.32	20.00	21.24	20.16	20.84	21.12	21.79	23.03
	8H	18.47	19.11	19.43	20.08	21.32	20.22	20.87	21.19	21.84	23.07
	12H	18.51	19.13	19.48	20.09	21.35	20.24	20.86	21.21	21.82	23.08
4H	2H	16.35	17.09	17.30	18.03	19.26	18.17	18.91	19.12	19.85	21.08
	3H	18.18	18.79	19.14	19.77	21.01	19.79	20.41	20.75	21.38	22.62
	4H	18.88	19.44	19.84	20.40	21.67	20.38	20.94	21.34	21.91	23.17
	6H	19.35	19.83	20.33	20.83	22.09	20.78	21.26	21.76	22.26	23.52
	8H	19.49	19.94	20.47	20.92	22.20	20.89	21.34	21.88	22.33	23.61
	12H	19.56	19.96	20.56	20.96	22.25	20.94	21.35	21.94	22.35	23.63
8H	4H	19.14	19.59	20.12	20.58	21.86	20.48	20.93	21.47	21.92	23.20
	6H	19.73	20.10	20.74	21.13	22.41	20.99	21.36	21.99	22.39	23.66
	8H	19.94	20.27	20.96	21.28	22.58	21.17	21.49	22.18	22.51	23.81
	12H	20.06	20.35	21.08	21.36	22.70	21.27	21.56	22.29	22.57	23.91
12H	4H	19.14	19.55	20.14	20.55	21.84	20.46	20.86	21.46	21.87	23.15
	6H	19.78	20.11	20.80	21.13	22.42	21.00	21.33	22.02	22.34	23.64
	8H	20.02	20.31	21.04	21.31	22.66	21.20	21.49	22.22	22.50	23.84