

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: P831048

Luminaire Tested: S123DIP-S1000D1025U835-4F0-1E-UDD-G

Issue Date: 05/03/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P831048  
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-S1000D1025U835-4F0-1E-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**

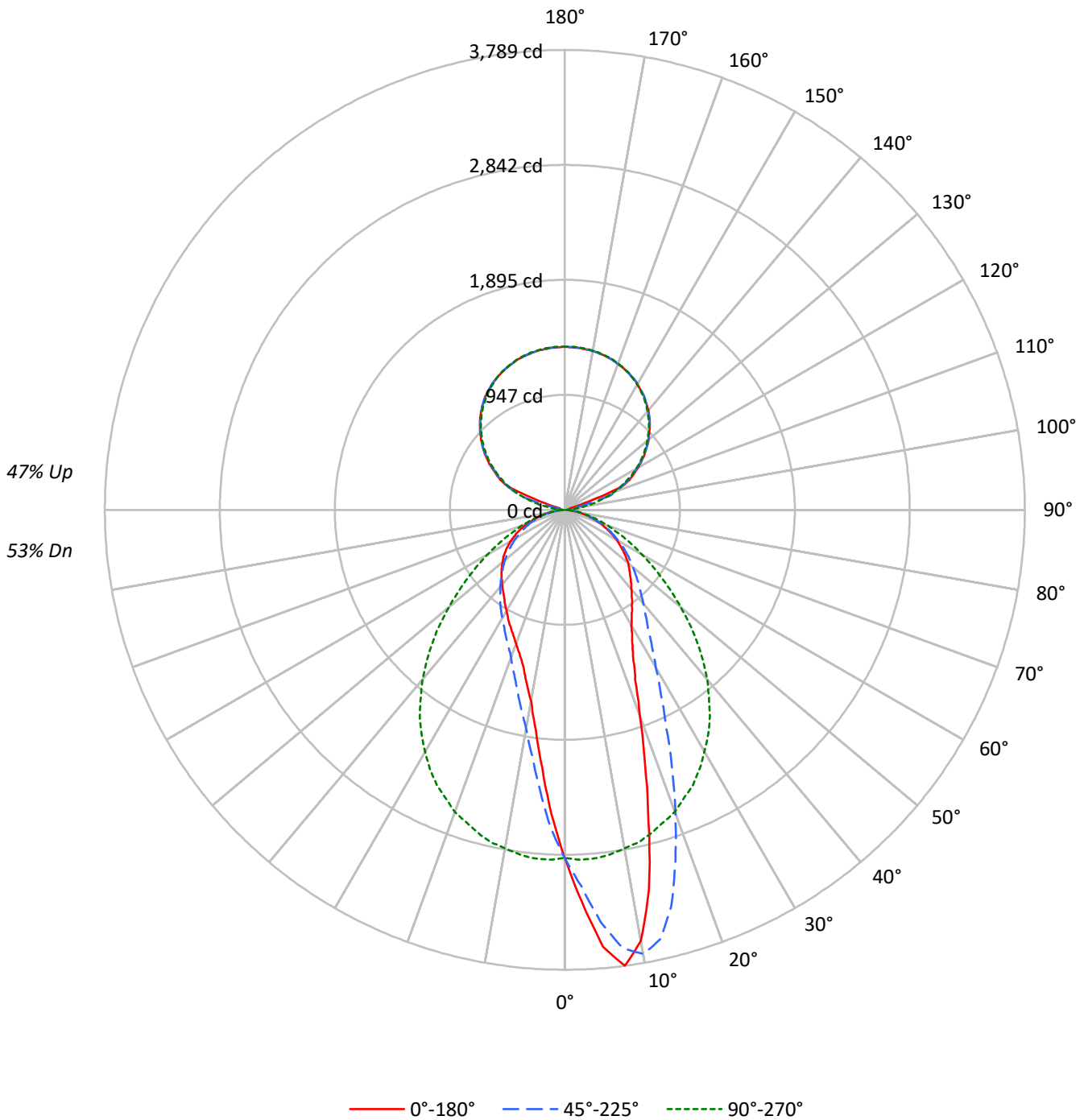
Lumens per Lamp: N/A  
Luminaire Lumens: 8708.5 lumens  
Efficiency: N/A  
Efficacy: 142.8 lumens/watt  
Spacing Criteria (0/90/45): 0.65 / 1.19 / 0.89  
Luminous Opening: Rectangular (W 4' x L: 0.25' x H: 0')  
CIE Type: General Diffuse

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°	30870	30870	30870	30870	30870
5°	39041	36847	31147	25099	23064
10°	39419	40611	30938	20007	17484
15°	29690	37706	30729	16944	14785
20°	20686	30511	30336	14818	13431
25°	15775	23464	29667	13632	12598
30°	13646	18641	28599	12795	11926
35°	12661	15738	27367	12189	11454
40°	11987	14119	25638	11612	11294
45°	11587	13067	23440	11163	11224
50°	11387	12234	20837	10752	11164
55°	10963	11626	18282	10365	11213
60°	10572	10973	15756	10000	11031
65°	9931	10356	13593	9610	10812
70°	9171	9571	11560	8963	10178
75°	8301	8580	9906	8330	9299
80°	6850	7507	7835	7259	7835
85°	5422	6076	5755	6163	6249

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 80°  
 Vertical Angle: 45°  
 Luminance: 26761 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	271.1	3.1
10°-20°	674.5	7.7
20°-30°	798.7	9.2
30°-40°	803.0	9.2
40°-50°	736.8	8.5
50°-60°	608.1	7.0
60°-70°	430.2	4.9
70°-80°	229.6	2.6
80°-90°	60.9	0.7
90°-100°	47.4	0.5
100°-110°	229.0	2.6
110°-120°	561.3	6.4
120°-130°	712.6	8.2
130°-140°	761.2	8.7
140°-150°	711.8	8.2
150°-160°	574.2	6.6
160°-170°	370.5	4.3
170°-180°	127.7	1.5
0°-30°	1744.3	20.0
0°-40°	2547.3	29.3
0°-60°	3892.2	44.7
0°-90°	4612.9	53.0
90°-120°	837.6	9.6
90°-150°	3023.2	34.7
90°-180°	4096.0	47.0
0°-180°	8708.5	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	2868	2868	2868	2868	2868	
5°	3613	3410	2883	2323	2135	344
15°	2664	3384	2758	1520	1327	736
25°	1328	1976	2498	1148	1061	627
35°	964	1198	2083	928	872	605
45°	761	858	1540	733	737	590
55°	584	620	974	552	598	523
65°	390	407	534	377	424	387
75°	200	206	238	200	224	210
85°	44	49	47	50	51	49
90°	30	24	1	24	30	16
95°	38	31	61	31	38	32
105°	44	219	297	219	44	91
115°	587	573	558	573	587	552
125°	802	798	786	798	802	717
135°	989	989	979	989	989	763
145°	1141	1139	1130	1139	1141	712
155°	1243	1244	1245	1244	1243	573
165°	1310	1309	1313	1309	1310	370
175°	1338	1340	1344	1340	1338	127
180°	1344	1344	1344	1344	1344	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	2867.9	2867.9	2867.9	2867.9	2867.9	2867.9	2867.9	2867.9	2867.9	2867.9	2867.9
2.5°	3232.6	3229.2	3225.9	3209.3	3192.6	3184.6	3176.7	3152.7	3128.8	3102.1	3075.5
5°	3613.2	3622.5	3631.8	3621.2	3610.5	3577.9	3545.3	3502.0	3458.8	3410.2	3361.6
7.5°	3788.8	3794.2	3799.5	3792.8	3786.2	3777.5	3768.9	3730.3	3691.7	3641.8	3591.9
10°	3606.5	3618.5	3630.5	3656.4	3682.4	3711.6	3740.9	3735.6	3730.3	3715.6	3701.0
12.5°	3205.9	3220.6	3235.2	3287.1	3339.0	3405.6	3472.1	3529.3	3586.6	3626.5	3666.4
15°	2664.3	2704.9	2745.5	2792.7	2840.0	2937.8	3035.6	3156.0	3276.5	3383.6	3490.7
17.5°	2194.5	2209.8	2225.1	2275.7	2326.3	2449.4	2572.5	2711.5	2850.6	3028.3	3205.9
20°	1805.9	1819.9	1833.9	1900.4	1966.9	2063.4	2159.9	2316.3	2472.7	2663.6	2854.6
22.5°	1517.1	1539.1	1561.0	1598.3	1635.6	1728.1	1820.6	1959.6	2098.7	2309.6	2520.6
25°	1328.2	1344.1	1360.1	1382.7	1405.3	1479.2	1553.1	1667.5	1782.0	1975.6	2169.2
27.5°	1199.1	1205.7	1212.4	1235.0	1257.6	1305.5	1353.4	1451.9	1550.4	1714.8	1879.1
30°	1097.9	1102.6	1107.2	1127.2	1147.2	1179.8	1212.4	1283.6	1354.8	1499.8	1644.9
32.5°	1027.4	1030.7	1034.0	1049.3	1064.7	1087.9	1111.2	1163.1	1215.0	1334.8	1454.6
35°	963.5	965.5	967.5	978.8	990.1	1007.4	1024.7	1064.0	1103.2	1197.7	1292.2
37.5°	907.6	910.3	912.9	919.6	926.2	941.6	956.9	988.1	1019.4	1091.9	1164.5
40°	853.1	857.7	862.4	867.0	871.7	884.3	897.0	920.9	944.9	1004.8	1064.7
42.5°	806.5	811.1	815.8	817.8	819.8	827.1	834.4	856.4	878.3	922.9	967.5
45°	761.2	763.2	765.2	767.2	769.2	775.2	781.2	800.5	819.8	858.4	897.0
47.5°	720.0	720.0	720.0	721.3	722.6	728.0	733.3	747.3	761.2	791.2	821.1
50°	680.0	680.0	680.0	678.1	676.1	679.4	682.7	693.4	704.0	730.6	757.2
52.5°	632.1	632.1	632.1	632.8	633.5	633.5	633.5	642.8	652.1	676.1	700.0
55°	584.2	586.9	589.6	587.6	585.6	586.9	588.2	594.2	600.2	619.5	638.8
57.5°	536.3	537.7	539.0	538.3	537.7	538.3	539.0	544.3	549.6	564.3	578.9
60°	491.1	491.1	491.1	489.7	488.4	489.7	491.1	493.7	496.4	509.7	523.0
62.5°	440.5	441.2	441.8	442.5	443.2	441.8	440.5	443.8	447.2	457.1	467.1
65°	389.9	390.6	391.3	393.3	395.3	393.9	392.6	395.9	399.2	406.6	413.9
67.5°	344.7	343.4	342.0	342.7	343.4	345.3	347.3	348.0	348.7	356.7	364.6
70°	291.4	292.8	294.1	293.4	292.8	293.4	294.1	296.1	298.1	304.1	310.1
72.5°	243.5	244.2	244.9	244.9	244.9	246.2	247.5	249.5	251.5	254.9	258.2
75°	199.6	199.6	199.6	201.0	202.3	202.9	203.6	203.6	203.6	206.3	208.9
77.5°	151.7	155.0	158.4	157.7	157.0	158.4	159.7	161.7	163.7	165.0	166.4
80°	110.5	110.5	110.5	111.1	111.8	113.8	115.8	117.1	118.4	121.1	123.8
82.5°	70.5	71.2	71.9	73.9	75.9	77.2	78.5	80.5	82.5	82.5	82.5
85°	43.9	42.6	41.3	42.6	43.9	45.2	46.6	47.2	47.9	49.2	50.6
87.5°	21.3	21.3	21.3	21.3	21.3	22.0	22.6	22.6	22.6	22.6	22.6
90°	29.9	29.5	29.1	28.6	28.2	27.5	26.6	25.7	24.8	24.0	21.1
92.5°	33.9	33.7	33.5	33.3	33.0	32.2	30.6	29.1	27.5	26.0	24.0
95°	37.9	37.9	37.9	37.9	37.9	37.2	35.6	34.0	32.5	30.9	28.5
97.5°	40.9	40.7	40.5	40.3	40.0	39.0	37.3	35.5	33.7	31.9	43.3
100°	41.9	41.7	41.5	41.3	41.0	40.0	38.3	36.5	34.7	32.9	67.5
102.5°	42.9	42.5	42.0	41.6	41.1	44.6	51.9	59.2	66.5	73.9	112.5
105°	43.9	43.5	43.0	42.6	42.1	61.6	100.8	140.1	179.3	218.6	238.6
107.5°	103.8	132.9	161.9	191.0	220.0	251.6	285.8	320.0	354.1	388.3	385.0
110°	274.5	306.2	337.9	369.6	401.4	420.9	428.2	435.5	442.8	450.2	447.7

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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	520.0	520.5	520.9	521.4	521.8	521.0	519.0	517.0	515.0	513.0	510.6
115°	586.9	586.0	585.1	584.2	583.4	581.8	579.6	577.4	575.2	572.9	570.9
117.5°	640.8	640.6	640.4	640.1	639.9	638.9	637.2	635.4	633.6	631.8	630.7
120°	696.7	696.7	696.7	696.7	696.7	695.8	694.0	692.3	690.5	688.7	688.1
122.5°	751.6	751.4	751.2	750.9	750.7	750.1	748.9	747.8	746.7	745.6	744.7
125°	802.5	802.1	801.6	801.2	800.7	800.3	799.8	799.4	799.0	798.5	797.6
127.5°	852.4	852.9	853.3	853.7	854.2	854.1	853.4	852.8	852.1	851.4	850.3
130°	900.3	900.8	901.2	901.7	902.1	901.9	901.0	900.1	899.2	898.3	897.4
132.5°	944.2	944.9	945.6	946.2	946.9	946.8	945.9	945.0	944.1	943.2	942.6
135°	989.2	989.8	990.5	991.2	991.8	991.8	991.2	990.5	989.8	989.2	988.3
137.5°	1032.1	1032.5	1033.0	1033.4	1033.9	1033.5	1032.4	1031.3	1030.2	1029.1	1028.6
140°	1070.0	1070.5	1070.9	1071.3	1071.8	1071.6	1070.7	1069.8	1068.9	1068.0	1067.4
142.5°	1104.9	1105.6	1106.3	1106.9	1107.6	1107.6	1106.9	1106.3	1105.6	1104.9	1104.3
145°	1140.9	1140.9	1140.9	1140.9	1140.9	1140.7	1140.2	1139.8	1139.3	1138.9	1138.4
147.5°	1166.8	1167.9	1169.1	1170.2	1171.3	1171.6	1171.2	1170.7	1170.3	1169.8	1169.4
150°	1196.8	1197.4	1198.1	1198.8	1199.4	1199.6	1199.1	1198.7	1198.2	1197.8	1197.3
152.5°	1220.7	1221.8	1223.0	1224.1	1225.2	1225.3	1224.4	1223.5	1222.6	1221.7	1221.5
155°	1242.7	1244.0	1245.4	1246.7	1248.0	1248.1	1247.0	1245.9	1244.8	1243.7	1243.5
157.5°	1261.7	1263.4	1265.2	1267.0	1268.8	1269.0	1267.6	1266.3	1265.0	1263.7	1263.9
160°	1279.6	1281.2	1282.7	1284.3	1285.8	1285.9	1284.6	1283.3	1282.0	1280.6	1280.8
162.5°	1296.6	1297.9	1299.3	1300.6	1301.9	1301.8	1300.3	1298.7	1297.1	1295.6	1295.8
165°	1309.6	1311.1	1312.7	1314.2	1315.8	1315.7	1313.9	1312.1	1310.3	1308.6	1308.8
167.5°	1319.6	1321.3	1323.1	1324.9	1326.6	1326.6	1324.9	1323.1	1321.3	1319.6	1319.6
170°	1328.5	1330.3	1332.1	1333.9	1335.6	1335.6	1333.9	1332.1	1330.3	1328.5	1328.5
172.5°	1333.5	1335.5	1337.5	1339.5	1341.5	1341.6	1339.8	1338.1	1336.3	1334.5	1334.3
175°	1338.5	1340.3	1342.1	1343.8	1345.6	1345.7	1344.2	1342.6	1341.1	1339.5	1339.3
177.5°	1339.5	1341.7	1343.9	1346.2	1348.4	1348.6	1346.8	1345.1	1343.3	1341.5	1341.3
180°	1343.5	1343.5	1343.5	1343.5	1343.5	1343.5	1343.5	1343.5	1343.5	1343.5	1343.5



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	2867.9	2867.9	2867.9	2867.9	2867.9	2867.9	2867.9	2867.9	2867.9	2867.9	2867.9
2.5°	3067.5	3059.5	3030.3	3001.0	2967.7	2934.5	2909.8	2885.2	2848.6	2812.0	2782.1
5°	3324.4	3287.1	3225.2	3163.4	3079.5	2995.7	2939.1	2882.6	2806.7	2730.8	2670.3
7.5°	3528.0	3464.1	3377.6	3291.1	3181.3	3071.5	2967.7	2863.9	2748.1	2632.4	2537.9
10°	3657.8	3614.5	3514.7	3414.9	3267.8	3120.8	2975.7	2830.6	2681.6	2532.5	2407.4
12.5°	3670.4	3674.4	3582.6	3490.7	3324.4	3158.0	2981.7	2805.4	2617.7	2430.1	2284.3
15°	3559.3	3627.8	3577.2	3526.7	3359.0	3191.3	2974.4	2757.5	2541.2	2324.9	2156.6
17.5°	3353.0	3500.0	3507.4	3514.7	3347.0	3179.3	2939.1	2698.9	2454.0	2209.2	2032.2
20°	3071.5	3288.4	3363.0	3437.5	3301.1	3164.7	2906.5	2648.3	2374.2	2100.0	1914.4
22.5°	2784.1	3047.6	3184.0	3320.4	3219.2	3118.1	2843.3	2568.5	2279.0	1989.6	1801.3
25°	2456.7	2744.1	2953.7	3163.4	3101.5	3039.6	2768.8	2497.9	2189.9	1881.8	1689.5
27.5°	2171.2	2463.3	2716.2	2969.1	2955.7	2942.4	2673.6	2404.8	2089.4	1774.0	1588.3
30°	1917.0	2189.2	2472.0	2754.8	2787.4	2820.0	2560.5	2301.0	1984.9	1668.8	1489.8
32.5°	1692.1	1929.7	2233.1	2536.5	2600.4	2664.3	2430.1	2195.8	1883.1	1570.4	1398.0
35°	1507.8	1723.4	2026.8	2330.3	2410.1	2490.0	2286.3	2082.7	1778.0	1473.2	1308.9
37.5°	1344.8	1525.1	1821.2	2117.3	2215.1	2313.0	2130.6	1948.3	1662.9	1377.4	1226.3
40°	1209.7	1354.8	1626.9	1899.1	2012.2	2125.3	1974.9	1824.6	1553.7	1282.9	1143.8
42.5°	1096.6	1225.7	1472.5	1719.4	1827.9	1936.3	1809.2	1682.2	1441.3	1200.4	1073.3
45°	1000.1	1103.2	1327.5	1551.7	1654.9	1758.0	1648.9	1539.8	1327.5	1115.2	996.8
47.5°	909.6	998.1	1189.8	1381.4	1473.2	1565.0	1479.9	1394.7	1215.0	1035.4	928.2
50°	828.4	899.6	1067.3	1235.0	1314.8	1394.7	1319.5	1244.3	1096.6	948.9	855.7
52.5°	757.9	815.8	956.2	1096.6	1165.1	1233.7	1169.1	1104.6	987.5	870.4	789.2
55°	688.0	737.3	859.0	980.8	1027.4	1074.0	1024.1	974.2	879.7	785.2	716.6
57.5°	622.8	666.7	766.6	866.4	902.3	938.2	893.0	847.7	776.5	705.3	648.1
60°	558.9	594.9	678.1	761.2	783.2	805.1	768.5	731.9	682.0	632.1	580.9
62.5°	499.7	532.3	594.2	656.1	670.7	685.4	657.4	629.5	591.5	553.6	513.7
65°	438.5	463.1	513.7	564.3	573.6	582.9	558.3	533.7	505.0	476.4	447.2
67.5°	381.9	399.2	440.5	481.8	482.4	483.1	463.1	443.2	427.2	411.2	387.9
70°	326.7	343.4	370.6	397.9	398.6	399.2	383.3	367.3	355.3	343.4	326.1
72.5°	270.2	282.1	302.8	323.4	322.1	320.7	310.7	300.8	291.4	282.1	269.5
75°	218.9	228.9	242.9	256.8	252.9	248.9	243.5	238.2	230.2	222.2	214.3
77.5°	172.3	178.3	186.3	194.3	191.6	189.0	184.3	179.7	173.7	167.7	164.4
80°	126.4	129.1	134.4	139.7	138.4	137.1	131.8	126.4	125.1	123.8	119.1
82.5°	85.8	89.2	90.5	91.8	91.2	90.5	86.5	82.5	81.2	79.8	79.2
85°	51.2	51.9	52.6	53.2	51.2	49.2	47.9	46.6	46.6	46.6	45.9
87.5°	23.3	24.0	24.0	24.0	23.3	22.6	21.3	20.0	20.6	21.3	21.3
90°	18.2	15.3	12.4	9.9	7.7	5.4	3.2	1.0	3.2	5.4	7.7
92.5°	22.0	20.0	18.0	17.6	19.0	20.3	21.6	23.0	21.6	20.3	19.0
95°	26.1	23.6	21.2	24.5	33.6	42.7	51.8	60.9	51.8	42.7	33.6
97.5°	54.6	65.9	77.2	86.0	92.2	98.4	104.6	110.8	104.6	98.4	92.2
100°	102.1	136.7	171.3	186.4	182.0	177.6	173.1	168.7	173.1	177.6	182.0
102.5°	151.1	189.6	228.2	246.1	243.2	240.3	237.4	234.6	237.4	240.3	243.2
105°	258.5	278.5	298.4	307.2	304.8	302.3	299.9	297.4	299.9	302.3	304.8
107.5°	381.6	378.3	375.0	372.3	370.3	368.3	366.3	364.3	366.3	368.3	370.3
110°	445.3	442.8	440.4	438.3	436.5	434.7	433.0	431.2	433.0	434.7	436.5





TEST NUMBER: P831048

CATALOG NUMBER: S123DIP-S1000D1025U835-4F0-1E-UDD-G

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	508.2	505.7	503.3	501.3	499.7	498.2	496.6	495.1	496.6	498.2	499.7
115°	568.9	566.9	565.0	563.3	562.0	560.6	559.3	558.0	559.3	560.6	562.0
117.5°	629.6	628.5	627.4	626.1	624.5	623.0	621.4	619.8	621.4	623.0	624.5
120°	687.4	686.7	686.1	684.7	682.7	680.7	678.7	676.7	678.7	680.7	682.7
122.5°	743.8	743.0	742.1	740.8	739.3	737.7	736.2	734.6	736.2	737.7	739.3
125°	796.7	795.9	795.0	793.6	791.9	790.1	788.3	786.5	788.3	790.1	791.9
127.5°	849.2	848.1	847.0	845.5	843.8	842.0	840.2	838.4	840.2	842.0	843.8
130°	896.6	895.7	894.8	893.5	891.7	889.9	888.1	886.4	888.1	889.9	891.7
132.5°	941.9	941.3	940.6	939.4	937.6	935.8	934.0	932.3	934.0	935.8	937.6
135°	987.4	986.5	985.6	984.5	983.2	981.8	980.5	979.2	980.5	981.8	983.2
137.5°	1028.2	1027.8	1027.3	1026.2	1024.4	1022.7	1020.9	1019.1	1020.9	1022.7	1024.4
140°	1066.7	1066.0	1065.4	1064.4	1063.0	1061.7	1060.4	1059.0	1060.4	1061.7	1063.0
142.5°	1103.6	1103.0	1102.3	1101.3	1100.0	1098.6	1097.3	1096.0	1097.3	1098.6	1100.0
145°	1138.0	1137.6	1137.1	1136.1	1134.6	1133.0	1131.5	1129.9	1131.5	1133.0	1134.6
147.5°	1168.9	1168.5	1168.1	1167.3	1166.2	1165.1	1164.0	1162.8	1164.0	1165.1	1166.2
150°	1196.9	1196.4	1196.0	1195.4	1194.8	1194.1	1193.5	1192.8	1193.5	1194.1	1194.8
152.5°	1221.3	1221.1	1220.8	1220.6	1220.4	1220.2	1220.0	1219.7	1220.0	1220.2	1220.4
155°	1243.2	1243.0	1242.8	1242.9	1243.4	1243.8	1244.2	1244.7	1244.2	1243.8	1243.4
157.5°	1264.1	1264.3	1264.5	1264.7	1264.7	1264.7	1264.7	1264.7	1264.7	1264.7	1264.7
160°	1281.1	1281.3	1281.5	1281.7	1282.0	1282.2	1282.4	1282.6	1282.4	1282.2	1282.0
162.5°	1296.0	1296.3	1296.5	1296.9	1297.6	1298.3	1298.9	1299.6	1298.9	1298.3	1297.6
165°	1309.0	1309.2	1309.5	1309.9	1310.6	1311.2	1311.9	1312.6	1311.9	1311.2	1310.6
167.5°	1319.6	1319.6	1319.6	1320.0	1320.9	1321.8	1322.7	1323.5	1322.7	1321.8	1320.9
170°	1328.5	1328.5	1328.5	1329.0	1329.9	1330.8	1331.6	1332.5	1331.6	1330.8	1329.9
172.5°	1334.1	1333.9	1333.6	1334.1	1335.2	1336.3	1337.4	1338.5	1337.4	1336.3	1335.2
175°	1339.1	1338.8	1338.6	1339.1	1340.2	1341.3	1342.4	1343.5	1342.4	1341.3	1340.2
177.5°	1341.1	1340.8	1340.6	1341.1	1342.2	1343.3	1344.4	1345.5	1344.4	1343.3	1342.2
180°	1343.5	1343.5	1343.5	1343.5	1343.5	1343.5	1343.5	1343.5	1343.5	1343.5	1343.5



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**CANDELA DISTRIBUTION (continued):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	2867.9	2867.9	2867.9	2867.9	2867.9	2867.9	2867.9	2867.9	2867.9	2867.9	2867.9
2.5°	2752.1	2726.2	2700.2	2680.3	2660.3	2626.4	2592.4	2584.4	2576.5	2565.2	2553.8
5°	2609.7	2545.9	2482.0	2424.7	2367.5	2322.9	2278.4	2249.1	2219.8	2198.5	2177.2
7.5°	2443.4	2347.6	2251.7	2183.9	2116.0	2051.5	1986.9	1966.3	1945.7	1917.7	1889.8
10°	2282.4	2176.6	2070.8	1982.3	1893.8	1830.5	1767.3	1742.0	1716.8	1681.5	1646.2
12.5°	2138.6	2022.8	1907.1	1817.9	1728.7	1667.5	1606.3	1569.7	1533.1	1513.1	1493.2
15°	1988.2	1864.5	1740.7	1658.2	1575.7	1520.5	1465.2	1433.3	1401.4	1382.1	1362.8
17.5°	1855.2	1732.7	1610.3	1531.1	1451.9	1401.4	1350.8	1322.8	1294.9	1280.2	1265.6
20°	1728.7	1609.0	1489.2	1412.0	1334.8	1293.6	1252.3	1234.3	1216.4	1204.4	1192.4
22.5°	1613.0	1495.2	1377.4	1311.5	1245.6	1212.4	1179.1	1166.5	1153.8	1143.8	1133.9
25°	1497.2	1392.0	1286.9	1231.0	1175.1	1147.8	1120.5	1107.9	1095.3	1085.3	1075.3
27.5°	1402.7	1302.2	1201.7	1153.8	1105.9	1084.6	1063.3	1053.3	1043.4	1034.0	1024.7
30°	1310.9	1221.0	1131.2	1089.9	1048.7	1029.4	1010.1	1000.1	990.1	981.5	972.8
32.5°	1225.7	1148.5	1071.3	1033.4	995.5	979.5	963.5	951.5	939.6	932.9	926.2
35°	1144.5	1075.3	1006.1	974.8	943.5	927.6	911.6	901.6	891.6	886.3	881.0
37.5°	1075.3	1013.4	951.5	921.6	891.6	876.3	861.0	852.4	843.7	841.7	839.7
40°	1004.8	951.5	898.3	869.0	839.7	826.4	813.1	807.8	802.5	801.2	799.8
42.5°	946.2	894.3	842.4	815.8	789.2	777.9	766.6	763.9	761.2	763.2	765.2
45°	878.3	835.1	791.8	767.2	742.6	733.3	724.0	722.0	720.0	724.0	728.0
47.5°	821.1	781.2	741.3	718.0	694.7	688.0	681.4	680.7	680.0	685.4	690.7
50°	762.6	724.0	685.4	666.7	648.1	642.1	636.1	638.1	640.1	648.8	657.4
52.5°	708.0	672.1	636.1	618.8	601.5	597.5	593.5	598.2	602.9	612.2	621.5
55°	648.1	615.5	582.9	569.6	556.3	552.3	548.3	557.6	566.9	575.6	584.2
57.5°	590.9	562.3	533.7	521.7	509.7	509.0	508.4	517.0	525.7	535.0	544.3
60°	529.7	505.7	481.8	472.4	463.1	464.5	465.8	475.8	485.7	493.1	500.4
62.5°	473.8	453.8	433.8	425.2	416.5	419.9	423.2	433.2	443.2	451.8	460.5
65°	417.9	401.2	384.6	378.6	372.6	377.3	381.9	390.6	399.2	405.2	411.2
67.5°	364.6	350.7	336.7	332.0	327.4	332.0	336.7	345.3	354.0	360.0	366.0
70°	308.7	297.4	286.1	282.8	279.5	284.8	290.1	297.4	304.8	310.7	316.7
72.5°	256.8	248.2	239.5	238.9	238.2	242.9	247.5	254.9	262.2	266.2	270.2
75°	206.3	201.6	197.0	196.3	195.6	200.3	204.9	208.9	212.9	216.3	219.6
77.5°	161.0	157.0	153.0	153.7	154.4	157.7	161.0	165.0	169.0	171.0	173.0
80°	114.5	113.1	111.8	113.1	114.5	117.1	119.8	122.4	125.1	126.4	127.8
82.5°	78.5	77.2	75.9	77.9	79.8	81.8	83.8	85.8	87.8	88.5	89.2
85°	45.2	47.2	49.2	49.2	49.2	49.9	50.6	51.2	51.9	51.2	50.6
87.5°	21.3	22.0	22.6	22.6	22.6	23.3	24.0	24.0	24.0	23.3	22.6
90°	9.9	12.4	15.3	18.2	21.1	24.0	24.8	25.7	26.6	27.5	28.2
92.5°	17.6	18.0	20.0	22.0	24.0	26.0	27.5	29.1	30.6	32.2	33.0
95°	24.5	21.2	23.6	26.1	28.5	30.9	32.5	34.0	35.6	37.2	37.9
97.5°	86.0	77.2	65.9	54.6	43.3	31.9	33.7	35.5	37.3	39.0	40.0
100°	186.4	171.3	136.7	102.1	67.5	32.9	34.7	36.5	38.3	40.0	41.0
102.5°	246.1	228.2	189.6	151.1	112.5	73.9	66.5	59.2	51.9	44.6	41.1
105°	307.2	298.4	278.5	258.5	238.6	218.6	179.3	140.1	100.8	61.6	42.1
107.5°	372.3	375.0	378.3	381.6	385.0	388.3	354.1	320.0	285.8	251.6	220.0
110°	438.3	440.4	442.8	445.3	447.7	450.2	442.8	435.5	428.2	420.9	401.4



TEST NUMBER: P831048

CATALOG NUMBER: S123DIP-S1000D1025U835-4F0-1E-UDD-G

**CANDELA DISTRIBUTION (continued):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	501.3	503.3	505.7	508.2	510.6	513.0	515.0	517.0	519.0	521.0	521.8
115°	563.3	565.0	566.9	568.9	570.9	572.9	575.2	577.4	579.6	581.8	583.4
117.5°	626.1	627.4	628.5	629.6	630.7	631.8	633.6	635.4	637.2	638.9	639.9
120°	684.7	686.1	686.7	687.4	688.1	688.7	690.5	692.3	694.0	695.8	696.7
122.5°	740.8	742.1	743.0	743.8	744.7	745.6	746.7	747.8	748.9	750.1	750.7
125°	793.6	795.0	795.9	796.7	797.6	798.5	799.0	799.4	799.8	800.3	800.7
127.5°	845.5	847.0	848.1	849.2	850.3	851.4	852.1	852.8	853.4	854.1	854.2
130°	893.5	894.8	895.7	896.6	897.4	898.3	899.2	900.1	901.0	901.9	902.1
132.5°	939.4	940.6	941.3	941.9	942.6	943.2	944.1	945.0	945.9	946.8	946.9
135°	984.5	985.6	986.5	987.4	988.3	989.2	989.8	990.5	991.2	991.8	991.8
137.5°	1026.2	1027.3	1027.8	1028.2	1028.6	1029.1	1030.2	1031.3	1032.4	1033.5	1033.9
140°	1064.4	1065.4	1066.0	1066.7	1067.4	1068.0	1068.9	1069.8	1070.7	1071.6	1071.8
142.5°	1101.3	1102.3	1103.0	1103.6	1104.3	1104.9	1105.6	1106.3	1106.9	1107.6	1107.6
145°	1136.1	1137.1	1137.6	1138.0	1138.4	1138.9	1139.3	1139.8	1140.2	1140.7	1140.9
147.5°	1167.3	1168.1	1168.5	1168.9	1169.4	1169.8	1170.3	1170.7	1171.2	1171.6	1171.3
150°	1195.4	1196.0	1196.4	1196.9	1197.3	1197.8	1198.2	1198.7	1199.1	1199.6	1199.4
152.5°	1220.6	1220.8	1221.1	1221.3	1221.5	1221.7	1222.6	1223.5	1224.4	1225.3	1225.2
155°	1242.9	1242.8	1243.0	1243.2	1243.5	1243.7	1244.8	1245.9	1247.0	1248.1	1248.0
157.5°	1264.7	1264.5	1264.3	1264.1	1263.9	1263.7	1265.0	1266.3	1267.6	1269.0	1268.8
160°	1281.7	1281.5	1281.3	1281.1	1280.8	1280.6	1282.0	1283.3	1284.6	1285.9	1285.8
162.5°	1296.9	1296.5	1296.3	1296.0	1295.8	1295.6	1297.1	1298.7	1300.3	1301.8	1301.9
165°	1309.9	1309.5	1309.2	1309.0	1308.8	1308.6	1310.3	1312.1	1313.9	1315.7	1315.8
167.5°	1320.0	1319.6	1319.6	1319.6	1319.6	1319.6	1321.3	1323.1	1324.9	1326.6	1326.6
170°	1329.0	1328.5	1328.5	1328.5	1328.5	1328.5	1330.3	1332.1	1333.9	1335.6	1335.6
172.5°	1334.1	1333.6	1333.9	1334.1	1334.3	1334.5	1336.3	1338.1	1339.8	1341.6	1341.5
175°	1339.1	1338.6	1338.8	1339.1	1339.3	1339.5	1341.1	1342.6	1344.2	1345.7	1345.6
177.5°	1341.1	1340.6	1340.8	1341.1	1341.3	1341.5	1343.3	1345.1	1346.8	1348.6	1348.4
180°	1343.5	1343.5	1343.5	1343.5	1343.5	1343.5	1343.5	1343.5	1343.5	1343.5	1343.5



TEST NUMBER: P831048

CATALOG NUMBER: S123DIP-S1000D1025U835-4F0-1E-UDD-G

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
0°	2867.9	2867.9	2867.9	2867.9
2.5°	2549.2	2544.5	2525.9	2507.3
5°	2161.2	2145.3	2140.0	2134.6
7.5°	1888.4	1887.1	1859.2	1831.2
10°	1648.2	1650.2	1624.9	1599.6
12.5°	1476.5	1459.9	1457.9	1455.9
15°	1347.5	1332.1	1329.5	1326.8
17.5°	1256.3	1247.0	1244.3	1241.7
20°	1187.1	1181.8	1177.1	1172.5
22.5°	1127.2	1120.5	1116.6	1112.6
25°	1069.3	1063.3	1062.0	1060.7
27.5°	1017.4	1010.1	1010.1	1010.1
30°	968.2	963.5	961.5	959.5
32.5°	922.3	918.3	918.3	918.3
35°	879.0	877.0	874.3	871.7
37.5°	839.7	839.7	838.4	837.1
40°	801.8	803.8	803.8	803.8
42.5°	767.2	769.2	769.2	769.2
45°	731.3	734.6	735.9	737.3
47.5°	696.0	701.3	702.7	704.0
50°	661.4	665.4	666.1	666.7
52.5°	626.1	630.8	634.1	637.5
55°	588.9	593.5	595.5	597.5
57.5°	549.0	553.6	554.3	555.0
60°	505.0	509.7	511.0	512.4
62.5°	463.1	465.8	467.1	468.4
65°	415.2	419.2	421.9	424.5
67.5°	369.3	372.6	372.6	372.6
70°	318.1	319.4	321.4	323.4
72.5°	270.8	271.5	271.5	271.5
75°	220.9	222.2	222.9	223.6
77.5°	173.7	174.3	174.3	174.3
80°	127.1	126.4	126.4	126.4
82.5°	87.2	85.2	85.2	85.2
85°	49.9	49.2	49.9	50.6
87.5°	22.6	22.6	22.6	22.6
90°	28.6	29.1	29.5	29.9
92.5°	33.3	33.5	33.7	33.9
95°	37.9	37.9	37.9	37.9
97.5°	40.3	40.5	40.7	40.9
100°	41.3	41.5	41.7	41.9
102.5°	41.6	42.0	42.5	42.9
105°	42.6	43.0	43.5	43.9
107.5°	191.0	161.9	132.9	103.8
110°	369.6	337.9	306.2	274.5



TEST NUMBER: P831048

CATALOG NUMBER: S123DIP-S1000D1025U835-4F0-1E-UDD-G

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
112.5°	521.4	520.9	520.5	520.0
115°	584.2	585.1	586.0	586.9
117.5°	640.1	640.4	640.6	640.8
120°	696.7	696.7	696.7	696.7
122.5°	750.9	751.2	751.4	751.6
125°	801.2	801.6	802.1	802.5
127.5°	853.7	853.3	852.9	852.4
130°	901.7	901.2	900.8	900.3
132.5°	946.2	945.6	944.9	944.2
135°	991.2	990.5	989.8	989.2
137.5°	1033.4	1033.0	1032.5	1032.1
140°	1071.3	1070.9	1070.5	1070.0
142.5°	1106.9	1106.3	1105.6	1104.9
145°	1140.9	1140.9	1140.9	1140.9
147.5°	1170.2	1169.1	1167.9	1166.8
150°	1198.8	1198.1	1197.4	1196.8
152.5°	1224.1	1223.0	1221.8	1220.7
155°	1246.7	1245.4	1244.0	1242.7
157.5°	1267.0	1265.2	1263.4	1261.7
160°	1284.3	1282.7	1281.2	1279.6
162.5°	1300.6	1299.3	1297.9	1296.6
165°	1314.2	1312.7	1311.1	1309.6
167.5°	1324.9	1323.1	1321.3	1319.6
170°	1333.9	1332.1	1330.3	1328.5
172.5°	1339.5	1337.5	1335.5	1333.5
175°	1343.8	1342.1	1340.3	1338.5
177.5°	1346.2	1343.9	1341.7	1339.5
180°	1343.5	1343.5	1343.5	1343.5



TEST NUMBER: P831048

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**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	15.76	16.61	16.70	17.56	18.79	17.99	18.84	18.93	19.79	21.03
	3H	17.40	18.16	18.35	19.12	20.38	19.42	20.18	20.37	21.14	22.39
	4H	17.98	18.70	18.95	19.66	20.93	19.87	20.59	20.83	21.55	22.82
	6H	18.35	19.01	19.33	19.98	21.26	20.14	20.81	21.12	21.78	23.05
	8H	18.45	19.08	19.43	20.06	21.34	20.21	20.84	21.19	21.82	23.10
	12H	18.49	19.09	19.48	20.07	21.37	20.22	20.82	21.21	21.80	23.10
4H	2H	16.33	17.05	17.30	18.02	19.28	18.16	18.88	19.13	19.84	21.10
	3H	18.16	18.76	19.14	19.75	21.03	19.78	20.37	20.75	21.37	22.64
	4H	18.86	19.40	19.85	20.39	21.69	20.36	20.91	21.35	21.89	23.19
	6H	19.33	19.80	20.33	20.81	22.11	20.76	21.23	21.76	22.24	23.54
	8H	19.47	19.91	20.47	20.91	22.22	20.87	21.31	21.88	22.32	23.63
	12H	19.53	19.93	20.55	20.95	22.27	20.92	21.31	21.94	22.33	23.65
8H	4H	19.12	19.56	20.12	20.57	21.88	20.46	20.90	21.46	21.91	23.22
	6H	19.71	20.07	20.74	21.12	22.43	20.97	21.33	21.99	22.37	23.69
	8H	19.92	20.24	20.95	21.27	22.60	21.14	21.46	22.18	22.50	23.83
	12H	20.04	20.32	21.08	21.35	22.72	21.25	21.53	22.28	22.55	23.93
12H	4H	19.12	19.52	20.14	20.54	21.86	20.44	20.83	21.46	21.85	23.17
	6H	19.76	20.08	20.80	21.11	22.44	20.98	21.30	22.01	22.33	23.66
	8H	20.00	20.28	21.03	21.30	22.68	21.18	21.46	22.22	22.49	23.86