

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: P831591

Luminaire Tested: S123DIP-S775D1025U840-4F0-1E-UDD-G

Issue Date: 05/03/2024

Test Information

Test Method: LM-79-2019
Report Number: P831591
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-S775D1025U840-4F0-1E-UDD-G
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, GRAZE OPTIC
UPLIGHT 1025 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: -

Summary

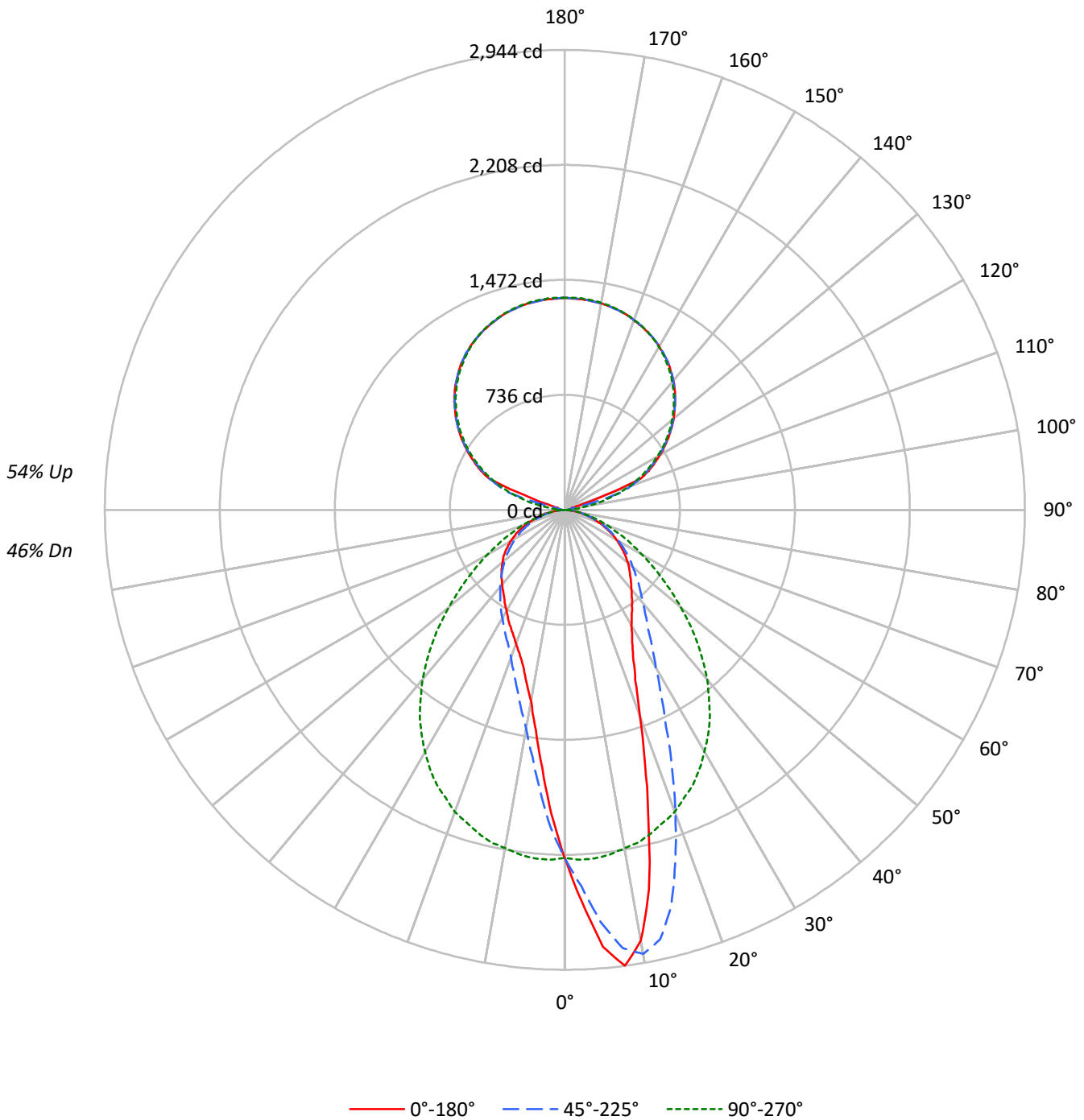
Lumens per Lamp: N/A
Luminaire Lumens: 7720.5 lumens
Efficiency: N/A
Efficacy: 149.0 lumens/watt
Spacing Criteria (0/90/45): 0.65 / 1.19 / 0.89
Luminous Opening: Rectangular (W 4' x L: 0.25' x H: 0')
CIE Type: General Diffuse

Input Watts (W): 51.8
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	106	106	106	106	98	98	98	98	81	81	81	66	66	66	53	53	53	46				46
1	97	93	90	86	89	86	83	80	72	70	68	59	58	56	47	46	46	40				40
2	89	82	76	71	82	76	71	66	64	60	57	53	50	48	42	41	39	34				34
3	82	73	66	60	75	67	61	56	57	52	49	47	44	41	38	36	34	30				30
4	75	65	57	51	69	60	53	48	51	46	42	42	39	36	34	32	30	26				26
5	69	58	50	44	63	54	47	42	46	41	37	38	34	31	31	29	26	23				23
6	64	52	45	39	59	49	42	37	42	36	32	35	31	28	29	26	24	21				21
7	59	47	40	34	54	44	37	33	38	33	29	32	28	25	27	24	21	19				19
8	55	43	36	31	51	40	34	29	35	30	26	30	26	23	25	22	19	17				17
9	52	40	33	28	47	37	31	26	32	27	23	27	23	21	23	20	18	16				16
10	48	37	30	25	45	34	28	24	30	25	21	25	22	19	21	18	16	14				14

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	23983	23983	23983	23983	23983
5°	30331	28627	24198	19500	17919
10°	30626	31552	24037	15545	13584
15°	23066	29294	23873	13164	11487
20°	16071	23704	23568	11512	10434
25°	12256	18229	23049	10592	9786
30°	10602	14482	22219	9940	9266
35°	9837	12227	21262	9469	8899
40°	9312	10968	19918	9022	8775
45°	9003	10152	18211	8672	8719
50°	8847	9505	16188	8354	8674
55°	8518	9032	14202	8053	8711
60°	8213	8525	12243	7767	8570
65°	7715	8046	10560	7465	8400
70°	7125	7437	8982	6965	7906
75°	6450	6667	7698	6471	7224
80°	5318	5833	6087	5641	6087
85°	4211	4730	4471	4792	4854

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 80°
 Vertical Angle: 45°
 Luminance: 20791 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	210.6	2.7
10°-20°	524.0	6.8
20°-30°	620.5	8.0
30°-40°	623.9	8.1
40°-50°	572.4	7.4
50°-60°	472.4	6.1
60°-70°	334.2	4.3
70°-80°	178.4	2.3
80°-90°	48.0	0.6
90°-100°	47.8	0.6
100°-110°	231.2	3.0
110°-120°	566.8	7.3
120°-130°	719.6	9.3
130°-140°	768.7	10.0
140°-150°	718.8	9.3
150°-160°	579.8	7.5
160°-170°	374.2	4.8
170°-180°	128.9	1.7
0°-30°	1355.2	17.6
0°-40°	1979.1	25.6
0°-60°	3023.9	39.2
0°-90°	3584.5	46.4
90°-120°	845.9	11.0
90°-150°	3053.1	39.5
90°-180°	4136.0	53.6
0°-180°	7720.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2228	2228	2228	2228	2228	
5°	2807	2649	2240	1805	1658	267
15°	2070	2629	2142	1181	1031	572
25°	1032	1535	1941	892	824	487
35°	749	930	1618	721	677	470
45°	591	667	1196	570	573	458
55°	454	481	757	429	464	406
65°	303	316	415	293	330	301
75°	155	160	185	156	174	163
85°	34	38	36	39	39	38
90°	30	24	1	24	30	15
95°	38	31	62	31	38	32
105°	44	221	300	221	44	92
115°	593	579	564	579	593	557
125°	810	806	794	806	810	724
135°	999	999	989	999	999	771
145°	1152	1150	1141	1150	1152	719
155°	1255	1256	1257	1256	1255	579
165°	1322	1322	1326	1322	1322	374
175°	1352	1353	1357	1353	1352	129
180°	1357	1357	1357	1357	1357	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	2228.1	2228.1	2228.1	2228.1	2228.1	2228.1	2228.1	2228.1	2228.1	2228.1	2228.1
2.5°	2511.4	2508.8	2506.2	2493.3	2480.4	2474.2	2468.0	2449.4	2430.8	2410.1	2389.4
5°	2807.1	2814.4	2821.6	2813.3	2805.1	2779.7	2754.4	2720.8	2687.2	2649.4	2611.7
7.5°	2943.6	2947.7	2951.9	2946.7	2941.5	2934.8	2928.1	2898.1	2868.1	2829.4	2790.6
10°	2802.0	2811.3	2820.6	2840.7	2860.9	2883.6	2906.4	2902.2	2898.1	2886.7	2875.4
12.5°	2490.7	2502.1	2513.5	2553.8	2594.1	2645.8	2697.5	2742.0	2786.4	2817.5	2848.5
15°	2069.9	2101.5	2133.0	2169.7	2206.4	2282.4	2358.4	2452.0	2545.5	2628.8	2712.0
17.5°	1705.0	1716.8	1728.7	1768.0	1807.3	1902.9	1998.6	2106.6	2214.7	2352.7	2490.7
20°	1403.0	1413.9	1424.8	1476.5	1528.1	1603.1	1678.1	1799.6	1921.0	2069.4	2217.8
22.5°	1178.7	1195.7	1212.8	1241.8	1270.7	1342.6	1414.4	1522.5	1630.5	1794.4	1958.3
25°	1031.9	1044.3	1056.7	1074.3	1091.8	1149.2	1206.6	1295.5	1384.4	1534.9	1685.3
27.5°	931.6	936.7	941.9	959.5	977.1	1014.3	1051.5	1128.0	1204.5	1332.2	1459.9
30°	853.0	856.6	860.2	875.7	891.2	916.6	941.9	997.2	1052.5	1165.2	1277.9
32.5°	798.2	800.8	803.4	815.3	827.1	845.2	863.3	903.7	944.0	1037.0	1130.1
35°	748.6	750.1	751.7	760.5	769.2	782.7	796.1	826.6	857.1	930.5	1003.9
37.5°	705.1	707.2	709.3	714.4	719.6	731.5	743.4	767.7	792.0	848.3	904.7
40°	662.7	666.4	670.0	673.6	677.2	687.0	696.9	715.5	734.1	780.6	827.1
42.5°	626.6	630.2	633.8	635.4	636.9	642.6	648.3	665.3	682.4	717.0	751.7
45°	591.4	593.0	594.5	596.1	597.6	602.3	606.9	621.9	636.9	666.9	696.9
47.5°	559.4	559.4	559.4	560.4	561.4	565.6	569.7	580.6	591.4	614.7	637.9
50°	528.3	528.3	528.3	526.8	525.2	527.8	530.4	538.7	546.9	567.6	588.3
52.5°	491.1	491.1	491.1	491.6	492.2	492.2	492.2	499.4	506.6	525.2	543.8
55°	453.9	456.0	458.0	456.5	454.9	456.0	457.0	461.6	466.3	481.3	496.3
57.5°	416.7	417.7	418.7	418.2	417.7	418.2	418.7	422.9	427.0	438.4	449.8
60°	381.5	381.5	381.5	380.5	379.5	380.5	381.5	383.6	385.7	396.0	406.3
62.5°	342.2	342.7	343.3	343.8	344.3	343.3	342.2	344.8	347.4	355.2	362.9
65°	302.9	303.5	304.0	305.5	307.1	306.0	305.0	307.6	310.2	315.9	321.6
67.5°	267.8	266.8	265.7	266.2	266.8	268.3	269.9	270.4	270.9	277.1	283.3
70°	226.4	227.5	228.5	228.0	227.5	228.0	228.5	230.0	231.6	236.3	240.9
72.5°	189.2	189.7	190.2	190.2	190.2	191.3	192.3	193.9	195.4	198.0	200.6
75°	155.1	155.1	155.1	156.1	157.2	157.7	158.2	158.2	158.2	160.3	162.3
77.5°	117.9	120.5	123.0	122.5	122.0	123.0	124.1	125.6	127.2	128.2	129.2
80°	85.8	85.8	85.8	86.3	86.9	88.4	90.0	91.0	92.0	94.1	96.2
82.5°	54.8	55.3	55.8	57.4	58.9	60.0	61.0	62.6	64.1	64.1	64.1
85°	34.1	33.1	32.1	33.1	34.1	35.2	36.2	36.7	37.2	38.3	39.3
87.5°	16.5	16.5	16.5	16.5	16.5	17.1	17.6	17.6	17.6	17.6	17.6
90°	30.2	29.8	29.3	28.9	28.4	27.8	26.9	26.0	25.1	24.2	21.3
92.5°	34.3	34.0	33.8	33.6	33.4	32.5	30.9	29.3	27.8	26.2	24.2
95°	38.3	38.3	38.3	38.3	38.3	37.5	36.0	34.4	32.8	31.2	28.8
97.5°	41.3	41.1	40.9	40.7	40.4	39.4	37.6	35.8	34.0	32.3	43.7
100°	42.3	42.1	41.9	41.7	41.4	40.4	38.6	36.8	35.1	33.3	68.2
102.5°	43.3	42.9	42.4	42.0	41.6	45.0	52.4	59.8	67.2	74.6	113.6
105°	44.4	43.9	43.5	43.0	42.6	62.2	101.8	141.5	181.1	220.8	240.9
107.5°	104.8	134.2	163.5	192.9	222.2	254.1	288.6	323.1	357.6	392.1	388.7
110°	277.2	309.2	341.3	373.3	405.3	425.0	432.4	439.8	447.2	454.6	452.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	525.2	525.6	526.1	526.5	527.0	526.2	524.2	522.1	520.1	518.1	515.6
115°	592.7	591.8	590.9	590.0	589.1	587.5	585.3	583.1	580.8	578.6	576.6
117.5°	647.1	646.9	646.7	646.5	646.2	645.2	643.4	641.6	639.9	638.1	636.9
120°	703.6	703.6	703.6	703.6	703.6	702.7	700.9	699.1	697.3	695.5	694.8
122.5°	759.0	758.8	758.6	758.3	758.1	757.5	756.3	755.2	754.1	753.0	752.1
125°	810.4	810.0	809.5	809.1	808.6	808.2	807.7	807.3	806.8	806.4	805.5
127.5°	860.8	861.3	861.7	862.2	862.6	862.5	861.8	861.2	860.5	859.8	858.7
130°	909.2	909.7	910.1	910.6	911.0	910.8	909.9	909.0	908.1	907.2	906.3
132.5°	953.6	954.2	954.9	955.6	956.3	956.1	955.2	954.3	953.5	952.6	951.9
135°	998.9	999.6	1000.3	1000.9	1001.6	1001.6	1000.9	1000.3	999.6	998.9	998.0
137.5°	1042.3	1042.7	1043.2	1043.6	1044.1	1043.7	1042.6	1041.5	1040.4	1039.2	1038.8
140°	1080.6	1081.0	1081.5	1081.9	1082.4	1082.1	1081.2	1080.3	1079.4	1078.6	1077.9
142.5°	1115.8	1116.5	1117.2	1117.9	1118.5	1118.5	1117.9	1117.2	1116.5	1115.8	1115.2
145°	1152.1	1152.1	1152.1	1152.1	1152.1	1151.9	1151.5	1151.0	1150.6	1150.1	1149.7
147.5°	1178.3	1179.5	1180.6	1181.7	1182.8	1183.2	1182.7	1182.3	1181.8	1181.4	1180.9
150°	1208.6	1209.3	1209.9	1210.6	1211.3	1211.4	1210.9	1210.5	1210.0	1209.6	1209.1
152.5°	1232.8	1233.9	1235.0	1236.1	1237.3	1237.4	1236.5	1235.6	1234.7	1233.8	1233.6
155°	1255.0	1256.3	1257.6	1259.0	1260.3	1260.4	1259.3	1258.2	1257.1	1256.0	1255.7
157.5°	1274.1	1275.9	1277.7	1279.5	1281.3	1281.5	1280.2	1278.8	1277.5	1276.1	1276.3
160°	1292.2	1293.8	1295.4	1297.0	1298.5	1298.6	1297.3	1295.9	1294.6	1293.3	1293.5
162.5°	1309.4	1310.7	1312.1	1313.4	1314.8	1314.6	1313.1	1311.5	1309.9	1308.4	1308.6
165°	1322.5	1324.1	1325.6	1327.2	1328.8	1328.6	1326.9	1325.1	1323.3	1321.5	1321.7
167.5°	1332.6	1334.4	1336.2	1337.9	1339.7	1339.7	1337.9	1336.2	1334.4	1332.6	1332.6
170°	1341.6	1343.4	1345.2	1347.0	1348.8	1348.8	1347.0	1345.2	1343.4	1341.6	1341.6
172.5°	1346.7	1348.7	1350.7	1352.7	1354.7	1354.9	1353.1	1351.3	1349.5	1347.7	1347.5
175°	1351.7	1353.5	1355.3	1357.1	1358.9	1359.0	1357.4	1355.9	1354.3	1352.7	1352.5
177.5°	1352.7	1355.0	1357.2	1359.4	1361.7	1361.9	1360.1	1358.3	1356.5	1354.7	1354.5
180°	1356.8	1356.8	1356.8	1356.8	1356.8	1356.8	1356.8	1356.8	1356.8	1356.8	1356.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	2228.1	2228.1	2228.1	2228.1	2228.1	2228.1	2228.1	2228.1	2228.1	2228.1	2228.1
2.5°	2383.2	2377.0	2354.3	2331.5	2305.7	2279.8	2260.7	2241.6	2213.1	2184.7	2161.4
5°	2582.8	2553.8	2505.7	2457.7	2392.5	2327.4	2283.4	2239.5	2180.6	2121.6	2074.6
7.5°	2740.9	2691.3	2624.1	2556.9	2471.6	2386.3	2305.7	2225.0	2135.1	2045.1	1971.7
10°	2841.8	2808.2	2730.6	2653.1	2538.8	2424.6	2311.9	2199.2	2083.4	1967.6	1870.4
12.5°	2851.6	2854.7	2783.3	2712.0	2582.8	2453.5	2316.5	2179.5	2033.7	1888.0	1774.7
15°	2765.2	2818.5	2779.2	2739.9	2609.6	2479.4	2310.8	2142.3	1974.3	1806.3	1675.5
17.5°	2605.0	2719.2	2724.9	2730.6	2600.3	2470.1	2283.4	2096.8	1906.6	1716.3	1578.8
20°	2386.3	2554.8	2612.7	2670.6	2564.7	2458.7	2258.1	2057.5	1844.5	1631.5	1487.3
22.5°	2163.0	2367.7	2473.7	2579.7	2501.1	2422.5	2209.0	1995.5	1770.6	1545.7	1399.4
25°	1908.6	2132.0	2294.8	2457.7	2409.6	2361.5	2151.1	1940.7	1701.3	1462.0	1312.6
27.5°	1686.9	1913.8	2110.3	2306.7	2296.4	2286.0	2077.2	1868.3	1623.3	1378.2	1234.0
30°	1489.4	1700.8	1920.5	2140.2	2165.6	2190.9	1989.3	1787.7	1542.1	1296.5	1157.5
32.5°	1314.6	1499.2	1734.9	1970.7	2020.3	2069.9	1888.0	1706.0	1463.0	1220.0	1086.1
35°	1171.4	1338.9	1574.7	1810.4	1872.4	1934.5	1776.3	1618.1	1381.3	1144.6	1016.9
37.5°	1044.8	1184.9	1414.9	1645.0	1721.0	1797.0	1655.3	1513.7	1291.9	1070.1	952.8
40°	939.8	1052.5	1264.0	1475.4	1563.3	1651.2	1534.4	1417.5	1207.1	996.7	888.7
42.5°	852.0	952.2	1144.0	1335.8	1420.1	1504.4	1405.6	1306.9	1119.7	932.6	833.9
45°	777.0	857.1	1031.3	1205.6	1285.7	1365.8	1281.0	1196.3	1031.3	866.4	774.4
47.5°	706.7	775.4	924.3	1073.2	1144.6	1215.9	1149.7	1083.6	944.0	804.4	721.2
50°	643.6	698.9	829.2	959.5	1021.5	1083.6	1025.1	966.7	852.0	737.2	664.8
52.5°	588.8	633.8	742.9	852.0	905.2	958.5	908.3	858.2	767.2	676.2	613.1
55°	534.5	572.8	667.4	762.0	798.2	834.4	795.6	756.8	683.4	610.0	556.8
57.5°	483.9	518.0	595.5	673.1	701.0	728.9	693.8	658.6	603.3	548.0	503.5
60°	434.3	462.2	526.8	591.4	608.5	625.5	597.1	568.7	529.9	491.1	451.3
62.5°	388.2	413.6	461.6	509.7	521.1	532.5	510.8	489.0	459.6	430.1	399.1
65°	340.7	359.8	399.1	438.4	445.6	452.9	433.7	414.6	392.4	370.1	347.4
67.5°	296.7	310.2	342.2	374.3	374.8	375.3	359.8	344.3	331.9	319.5	301.4
70°	253.8	266.8	287.9	309.1	309.7	310.2	297.8	285.4	276.1	266.8	253.3
72.5°	209.9	219.2	235.2	251.2	250.2	249.2	241.4	233.7	226.4	219.2	209.4
75°	170.1	177.8	188.7	199.5	196.4	193.3	189.2	185.1	178.9	172.7	166.5
77.5°	133.9	138.5	144.8	151.0	148.9	146.8	143.2	139.6	134.9	130.3	127.7
80°	98.2	100.3	104.4	108.6	107.5	106.5	102.4	98.2	97.2	96.2	92.5
82.5°	66.7	69.3	70.3	71.3	70.8	70.3	67.2	64.1	63.1	62.0	61.5
85°	39.8	40.3	40.8	41.4	39.8	38.3	37.2	36.2	36.2	36.2	35.7
87.5°	18.1	18.6	18.6	18.6	18.1	17.6	16.5	15.5	16.0	16.5	16.5
90°	18.4	15.5	12.5	10.0	7.7	5.5	3.2	1.0	3.2	5.5	7.7
92.5°	22.2	20.2	18.1	17.8	19.2	20.5	21.8	23.2	21.8	20.5	19.2
95°	26.3	23.9	21.4	24.8	33.9	43.1	52.3	61.5	52.3	43.1	33.9
97.5°	55.1	66.5	78.0	86.8	93.1	99.3	105.6	111.9	105.6	99.3	93.1
100°	103.2	138.1	173.0	188.3	183.8	179.3	174.8	170.4	174.8	179.3	183.8
102.5°	152.5	191.5	230.5	248.5	245.6	242.7	239.8	236.9	239.8	242.7	245.6
105°	261.1	281.2	301.4	310.2	307.8	305.3	302.8	300.4	302.8	305.3	307.8
107.5°	385.4	382.0	378.7	376.0	374.0	371.9	369.9	367.9	369.9	371.9	374.0
110°	449.7	447.2	444.7	442.6	440.8	439.0	437.2	435.5	437.2	439.0	440.8



TEST NUMBER: P831591

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	513.2	510.7	508.3	506.2	504.7	503.1	501.5	500.0	501.5	503.1	504.7
115°	574.6	572.5	570.5	568.8	567.5	566.2	564.8	563.5	564.8	566.2	567.5
117.5°	635.8	634.7	633.6	632.2	630.7	629.1	627.5	626.0	627.5	629.1	630.7
120°	694.2	693.5	692.8	691.5	689.5	687.5	685.4	683.4	685.4	687.5	689.5
122.5°	751.2	750.3	749.4	748.2	746.6	745.0	743.5	741.9	743.5	745.0	746.6
125°	804.6	803.7	802.8	801.5	799.7	797.9	796.1	794.3	796.1	797.9	799.7
127.5°	857.6	856.5	855.3	853.9	852.1	850.3	848.5	846.7	848.5	850.3	852.1
130°	905.4	904.5	903.6	902.3	900.5	898.7	896.9	895.1	896.9	898.7	900.5
132.5°	951.2	950.5	949.9	948.6	946.8	945.1	943.3	941.5	943.3	945.1	946.8
135°	997.1	996.2	995.3	994.2	992.9	991.5	990.2	988.8	990.2	991.5	992.9
137.5°	1038.3	1037.9	1037.4	1036.3	1034.5	1032.7	1031.0	1029.2	1031.0	1032.7	1034.5
140°	1077.2	1076.5	1075.9	1074.9	1073.5	1072.2	1070.8	1069.5	1070.8	1072.2	1073.5
142.5°	1114.5	1113.8	1113.2	1112.2	1110.8	1109.5	1108.1	1106.8	1108.1	1109.5	1110.8
145°	1149.2	1148.8	1148.3	1147.3	1145.8	1144.2	1142.6	1141.0	1142.6	1144.2	1145.8
147.5°	1180.5	1180.0	1179.6	1178.8	1177.7	1176.6	1175.4	1174.3	1175.4	1176.6	1177.7
150°	1208.7	1208.2	1207.8	1207.2	1206.6	1205.9	1205.2	1204.6	1205.2	1205.9	1206.6
152.5°	1233.3	1233.1	1232.9	1232.7	1232.4	1232.2	1232.0	1231.8	1232.0	1232.2	1232.4
155°	1255.5	1255.3	1255.1	1255.2	1255.6	1256.1	1256.5	1257.0	1256.5	1256.1	1255.6
157.5°	1276.6	1276.8	1277.0	1277.1	1277.1	1277.1	1277.1	1277.1	1277.1	1277.1	1277.1
160°	1293.7	1293.9	1294.2	1294.4	1294.6	1294.8	1295.0	1295.3	1295.0	1294.8	1294.6
162.5°	1308.8	1309.0	1309.3	1309.7	1310.4	1311.1	1311.7	1312.4	1311.7	1311.1	1310.4
165°	1321.9	1322.2	1322.4	1322.8	1323.5	1324.2	1324.8	1325.5	1324.8	1324.2	1323.5
167.5°	1332.6	1332.6	1332.6	1333.0	1333.9	1334.8	1335.7	1336.6	1335.7	1334.8	1333.9
170°	1341.6	1341.6	1341.6	1342.1	1343.0	1343.9	1344.8	1345.7	1344.8	1343.9	1343.0
172.5°	1347.2	1347.0	1346.8	1347.2	1348.4	1349.5	1350.6	1351.7	1350.6	1349.5	1348.4
175°	1352.3	1352.1	1351.8	1352.3	1353.4	1354.5	1355.6	1356.8	1355.6	1354.5	1353.4
177.5°	1354.3	1354.1	1353.8	1354.3	1355.4	1356.5	1357.7	1358.8	1357.7	1356.5	1355.4
180°	1356.8	1356.8	1356.8	1356.8	1356.8	1356.8	1356.8	1356.8	1356.8	1356.8	1356.8



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CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	2228.1	2228.1	2228.1	2228.1	2228.1	2228.1	2228.1	2228.1	2228.1	2228.1	2228.1
2.5°	2138.2	2118.0	2097.8	2082.3	2066.8	2040.5	2014.1	2007.9	2001.7	1992.9	1984.1
5°	2027.5	1977.9	1928.3	1883.8	1839.4	1804.7	1770.1	1747.3	1724.6	1708.1	1691.5
7.5°	1898.3	1823.9	1749.4	1696.7	1643.9	1593.8	1543.7	1527.6	1511.6	1489.9	1468.2
10°	1773.2	1691.0	1608.8	1540.0	1471.3	1422.2	1373.1	1353.4	1333.8	1306.4	1279.0
12.5°	1661.5	1571.6	1481.6	1412.3	1343.1	1295.5	1248.0	1219.5	1191.1	1175.6	1160.1
15°	1544.7	1448.5	1352.4	1288.3	1224.2	1181.3	1138.4	1113.5	1088.7	1073.7	1058.7
17.5°	1441.3	1346.2	1251.1	1189.5	1128.0	1088.7	1049.4	1027.7	1006.0	994.6	983.3
20°	1343.1	1250.0	1157.0	1097.0	1037.0	1005.0	972.9	959.0	945.0	935.7	926.4
22.5°	1253.1	1161.6	1070.1	1018.9	967.8	941.9	916.1	906.2	896.4	888.7	880.9
25°	1163.2	1081.5	999.8	956.4	913.0	891.8	870.6	860.7	850.9	843.2	835.4
27.5°	1089.8	1011.7	933.6	896.4	859.2	842.7	826.1	818.4	810.6	803.4	796.1
30°	1018.4	948.6	878.8	846.8	814.7	799.7	784.8	777.0	769.2	762.5	755.8
32.5°	952.2	892.3	832.3	802.8	773.4	761.0	748.6	739.3	730.0	724.8	719.6
35°	889.2	835.4	781.7	757.4	733.1	720.6	708.2	700.5	692.7	688.6	684.5
37.5°	835.4	787.3	739.3	716.0	692.7	680.8	669.0	662.2	655.5	654.0	652.4
40°	780.6	739.3	697.9	675.2	652.4	642.1	631.7	627.6	623.5	622.4	621.4
42.5°	735.1	694.8	654.5	633.8	613.1	604.3	595.5	593.5	591.4	593.0	594.5
45°	682.4	648.8	615.2	596.1	576.9	569.7	562.5	560.9	559.4	562.5	565.6
47.5°	637.9	606.9	575.9	557.8	539.7	534.5	529.4	528.9	528.3	532.5	536.6
50°	592.4	562.5	532.5	518.0	503.5	498.9	494.2	495.8	497.3	504.0	510.8
52.5°	550.1	522.1	494.2	480.8	467.3	464.2	461.1	464.8	468.4	475.6	482.8
55°	503.5	478.2	452.9	442.5	432.2	429.1	426.0	433.2	440.5	447.2	453.9
57.5°	459.1	436.8	414.6	405.3	396.0	395.5	395.0	401.7	408.4	415.6	422.9
60°	411.5	392.9	374.3	367.0	359.8	360.8	361.9	369.6	377.4	383.1	388.8
62.5°	368.1	352.6	337.1	330.3	323.6	326.2	328.8	336.5	344.3	351.0	357.7
65°	324.7	311.7	298.8	294.2	289.5	293.1	296.7	303.5	310.2	314.8	319.5
67.5°	283.3	272.4	261.6	258.0	254.3	258.0	261.6	268.3	275.0	279.7	284.3
70°	239.9	231.1	222.3	219.7	217.1	221.3	225.4	231.1	236.8	241.4	246.1
72.5°	199.5	192.8	186.1	185.6	185.1	188.7	192.3	198.0	203.7	206.8	209.9
75°	160.3	156.6	153.0	152.5	152.0	155.6	159.2	162.3	165.4	168.0	170.6
77.5°	125.1	122.0	118.9	119.4	119.9	122.5	125.1	128.2	131.3	132.9	134.4
80°	88.9	87.9	86.9	87.9	88.9	91.0	93.1	95.1	97.2	98.2	99.3
82.5°	61.0	60.0	58.9	60.5	62.0	63.6	65.1	66.7	68.2	68.8	69.3
85°	35.2	36.7	38.3	38.3	38.3	38.8	39.3	39.8	40.3	39.8	39.3
87.5°	16.5	17.1	17.6	17.6	17.6	18.1	18.6	18.6	18.6	18.1	17.6
90°	10.0	12.5	15.5	18.4	21.3	24.2	25.1	26.0	26.9	27.8	28.4
92.5°	17.8	18.1	20.2	22.2	24.2	26.2	27.8	29.3	30.9	32.5	33.4
95°	24.8	21.4	23.9	26.3	28.8	31.2	32.8	34.4	36.0	37.5	38.3
97.5°	86.8	78.0	66.5	55.1	43.7	32.3	34.0	35.8	37.6	39.4	40.4
100°	188.3	173.0	138.1	103.2	68.2	33.3	35.1	36.8	38.6	40.4	41.4
102.5°	248.5	230.5	191.5	152.5	113.6	74.6	67.2	59.8	52.4	45.0	41.6
105°	310.2	301.4	281.2	261.1	240.9	220.8	181.1	141.5	101.8	62.2	42.6
107.5°	376.0	378.7	382.0	385.4	388.7	392.1	357.6	323.1	288.6	254.1	222.2
110°	442.6	444.7	447.2	449.7	452.1	454.6	447.2	439.8	432.4	425.0	405.3



TEST NUMBER: P831591

CATALOG NUMBER: S123DIP-S775D1025U840-4F0-1E-UDD-G

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	506.2	508.3	510.7	513.2	515.6	518.1	520.1	522.1	524.2	526.2	527.0
115°	568.8	570.5	572.5	574.6	576.6	578.6	580.8	583.1	585.3	587.5	589.1
117.5°	632.2	633.6	634.7	635.8	636.9	638.1	639.9	641.6	643.4	645.2	646.2
120°	691.5	692.8	693.5	694.2	694.8	695.5	697.3	699.1	700.9	702.7	703.6
122.5°	748.2	749.4	750.3	751.2	752.1	753.0	754.1	755.2	756.3	757.5	758.1
125°	801.5	802.8	803.7	804.6	805.5	806.4	806.8	807.3	807.7	808.2	808.6
127.5°	853.9	855.3	856.5	857.6	858.7	859.8	860.5	861.2	861.8	862.5	862.6
130°	902.3	903.6	904.5	905.4	906.3	907.2	908.1	909.0	909.9	910.8	911.0
132.5°	948.6	949.9	950.5	951.2	951.9	952.6	953.5	954.3	955.2	956.1	956.3
135°	994.2	995.3	996.2	997.1	998.0	998.9	999.6	1000.3	1000.9	1001.6	1001.6
137.5°	1036.3	1037.4	1037.9	1038.3	1038.8	1039.2	1040.4	1041.5	1042.6	1043.7	1044.1
140°	1074.9	1075.9	1076.5	1077.2	1077.9	1078.6	1079.4	1080.3	1081.2	1082.1	1082.4
142.5°	1112.2	1113.2	1113.8	1114.5	1115.2	1115.8	1116.5	1117.2	1117.9	1118.5	1118.5
145°	1147.3	1148.3	1148.8	1149.2	1149.7	1150.1	1150.6	1151.0	1151.5	1151.9	1152.1
147.5°	1178.8	1179.6	1180.0	1180.5	1180.9	1181.4	1181.8	1182.3	1182.7	1183.2	1182.8
150°	1207.2	1207.8	1208.2	1208.7	1209.1	1209.6	1210.0	1210.5	1210.9	1211.4	1211.3
152.5°	1232.7	1232.9	1233.1	1233.3	1233.6	1233.8	1234.7	1235.6	1236.5	1237.4	1237.3
155°	1255.2	1255.1	1255.3	1255.5	1255.7	1256.0	1257.1	1258.2	1259.3	1260.4	1260.3
157.5°	1277.1	1277.0	1276.8	1276.6	1276.3	1276.1	1277.5	1278.8	1280.2	1281.5	1281.3
160°	1294.4	1294.2	1293.9	1293.7	1293.5	1293.3	1294.6	1295.9	1297.3	1298.6	1298.5
162.5°	1309.7	1309.3	1309.0	1308.8	1308.6	1308.4	1309.9	1311.5	1313.1	1314.6	1314.8
165°	1322.8	1322.4	1322.2	1321.9	1321.7	1321.5	1323.3	1325.1	1326.9	1328.6	1328.8
167.5°	1333.0	1332.6	1332.6	1332.6	1332.6	1332.6	1334.4	1336.2	1337.9	1339.7	1339.7
170°	1342.1	1341.6	1341.6	1341.6	1341.6	1341.6	1343.4	1345.2	1347.0	1348.8	1348.8
172.5°	1347.2	1346.8	1347.0	1347.2	1347.5	1347.7	1349.5	1351.3	1353.1	1354.9	1354.7
175°	1352.3	1351.8	1352.1	1352.3	1352.5	1352.7	1354.3	1355.9	1357.4	1359.0	1358.9
177.5°	1354.3	1353.8	1354.1	1354.3	1354.5	1354.7	1356.5	1358.3	1360.1	1361.9	1361.7
180°	1356.8	1356.8	1356.8	1356.8	1356.8	1356.8	1356.8	1356.8	1356.8	1356.8	1356.8



TEST NUMBER: P831591

CATALOG NUMBER: S123DIP-S775D1025U840-4F0-1E-UDD-G

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	2228.1	2228.1	2228.1	2228.1
2.5°	1980.5	1976.9	1962.4	1947.9
5°	1679.1	1666.7	1662.6	1658.4
7.5°	1467.1	1466.1	1444.4	1422.7
10°	1280.5	1282.1	1262.4	1242.8
12.5°	1147.1	1134.2	1132.7	1131.1
15°	1046.9	1035.0	1032.9	1030.8
17.5°	976.0	968.8	966.7	964.7
20°	922.3	918.1	914.5	910.9
22.5°	875.7	870.6	867.5	864.4
25°	830.8	826.1	825.1	824.0
27.5°	790.4	784.8	784.8	784.8
30°	752.2	748.6	747.0	745.5
32.5°	716.5	713.4	713.4	713.4
35°	682.9	681.4	679.3	677.2
37.5°	652.4	652.4	651.4	650.3
40°	622.9	624.5	624.5	624.5
42.5°	596.1	597.6	597.6	597.6
45°	568.1	570.7	571.8	572.8
47.5°	540.7	544.9	545.9	546.9
50°	513.9	517.0	517.5	518.0
52.5°	486.5	490.1	492.7	495.3
55°	457.5	461.1	462.7	464.2
57.5°	426.5	430.1	430.6	431.1
60°	392.4	396.0	397.0	398.1
62.5°	359.8	361.9	362.9	363.9
65°	322.6	325.7	327.8	329.8
67.5°	286.9	289.5	289.5	289.5
70°	247.1	248.1	249.7	251.2
72.5°	210.4	210.9	210.9	210.9
75°	171.6	172.7	173.2	173.7
77.5°	134.9	135.4	135.4	135.4
80°	98.7	98.2	98.2	98.2
82.5°	67.7	66.2	66.2	66.2
85°	38.8	38.3	38.8	39.3
87.5°	17.6	17.6	17.6	17.6
90°	28.9	29.3	29.8	30.2
92.5°	33.6	33.8	34.0	34.3
95°	38.3	38.3	38.3	38.3
97.5°	40.7	40.9	41.1	41.3
100°	41.7	41.9	42.1	42.3
102.5°	42.0	42.4	42.9	43.3
105°	43.0	43.5	43.9	44.4
107.5°	192.9	163.5	134.2	104.8
110°	373.3	341.3	309.2	277.2



TEST NUMBER: P831591

CATALOG NUMBER: S123DIP-S775D1025U840-4F0-1E-UDD-G

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
112.5°	526.5	526.1	525.6	525.2
115°	590.0	590.9	591.8	592.7
117.5°	646.5	646.7	646.9	647.1
120°	703.6	703.6	703.6	703.6
122.5°	758.3	758.6	758.8	759.0
125°	809.1	809.5	810.0	810.4
127.5°	862.2	861.7	861.3	860.8
130°	910.6	910.1	909.7	909.2
132.5°	955.6	954.9	954.2	953.6
135°	1000.9	1000.3	999.6	998.9
137.5°	1043.6	1043.2	1042.7	1042.3
140°	1081.9	1081.5	1081.0	1080.6
142.5°	1117.9	1117.2	1116.5	1115.8
145°	1152.1	1152.1	1152.1	1152.1
147.5°	1181.7	1180.6	1179.5	1178.3
150°	1210.6	1209.9	1209.3	1208.6
152.5°	1236.1	1235.0	1233.9	1232.8
155°	1259.0	1257.6	1256.3	1255.0
157.5°	1279.5	1277.7	1275.9	1274.1
160°	1297.0	1295.4	1293.8	1292.2
162.5°	1313.4	1312.1	1310.7	1309.4
165°	1327.2	1325.6	1324.1	1322.5
167.5°	1337.9	1336.2	1334.4	1332.6
170°	1347.0	1345.2	1343.4	1341.6
172.5°	1352.7	1350.7	1348.7	1346.7
175°	1357.1	1355.3	1353.5	1351.7
177.5°	1359.4	1357.2	1355.0	1352.7
180°	1356.8	1356.8	1356.8	1356.8



TEST NUMBER: P831591

CATALOG NUMBER: S123DIP-S775D1025U840-4F0-1E-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	14.26	15.06	15.26	16.06	17.39	16.50	17.30	17.49	18.30	19.62
	3H	15.91	16.62	16.91	17.63	18.98	17.92	18.63	18.93	19.64	20.99
	4H	16.48	17.16	17.50	18.17	19.52	18.37	19.04	19.39	20.06	21.41
	6H	16.85	17.47	17.88	18.49	19.85	18.64	19.26	19.67	20.28	21.64
	8H	16.94	17.53	17.98	18.57	19.93	18.70	19.29	19.73	20.33	21.69
	12H	16.99	17.55	18.02	18.57	19.96	18.72	19.28	19.76	20.31	21.69
4H	2H	14.83	15.51	15.85	16.52	17.87	16.66	17.33	17.68	18.34	19.70
	3H	16.65	17.22	17.69	18.26	19.62	18.27	18.83	19.30	19.87	21.24
	4H	17.35	17.86	18.39	18.90	20.29	18.85	19.37	19.89	20.40	21.79
	6H	17.82	18.26	18.87	19.32	20.71	19.25	19.69	20.30	20.75	22.14
	8H	17.96	18.37	19.01	19.42	20.82	19.36	19.77	20.41	20.82	22.22
	12H	18.02	18.39	19.09	19.46	20.86	19.40	19.78	20.47	20.84	22.25
8H	4H	17.61	18.02	18.66	19.07	20.47	18.95	19.36	20.00	20.41	21.81
	6H	18.20	18.54	19.27	19.63	21.03	19.45	19.79	20.52	20.88	22.28
	8H	18.40	18.70	19.49	19.78	21.20	19.63	19.93	20.71	21.01	22.42
	12H	18.53	18.79	19.61	19.86	21.32	19.73	19.99	20.81	21.06	22.52
12H	4H	17.61	17.98	18.68	19.05	20.45	18.92	19.30	19.99	20.36	21.77
	6H	18.25	18.55	19.33	19.62	21.04	19.47	19.76	20.55	20.84	22.26
	8H	18.48	18.74	19.56	19.81	21.27	19.66	19.92	20.75	21.00	22.45