

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: P831069

Luminaire Tested: S123DIP-S1000D1025U950-4F0-1E-UDD-G

Issue Date: 05/03/2024

Test Information

Test Method: LM-79-2019
Report Number: P831069
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-S1000D1025U950-4F0-1E-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

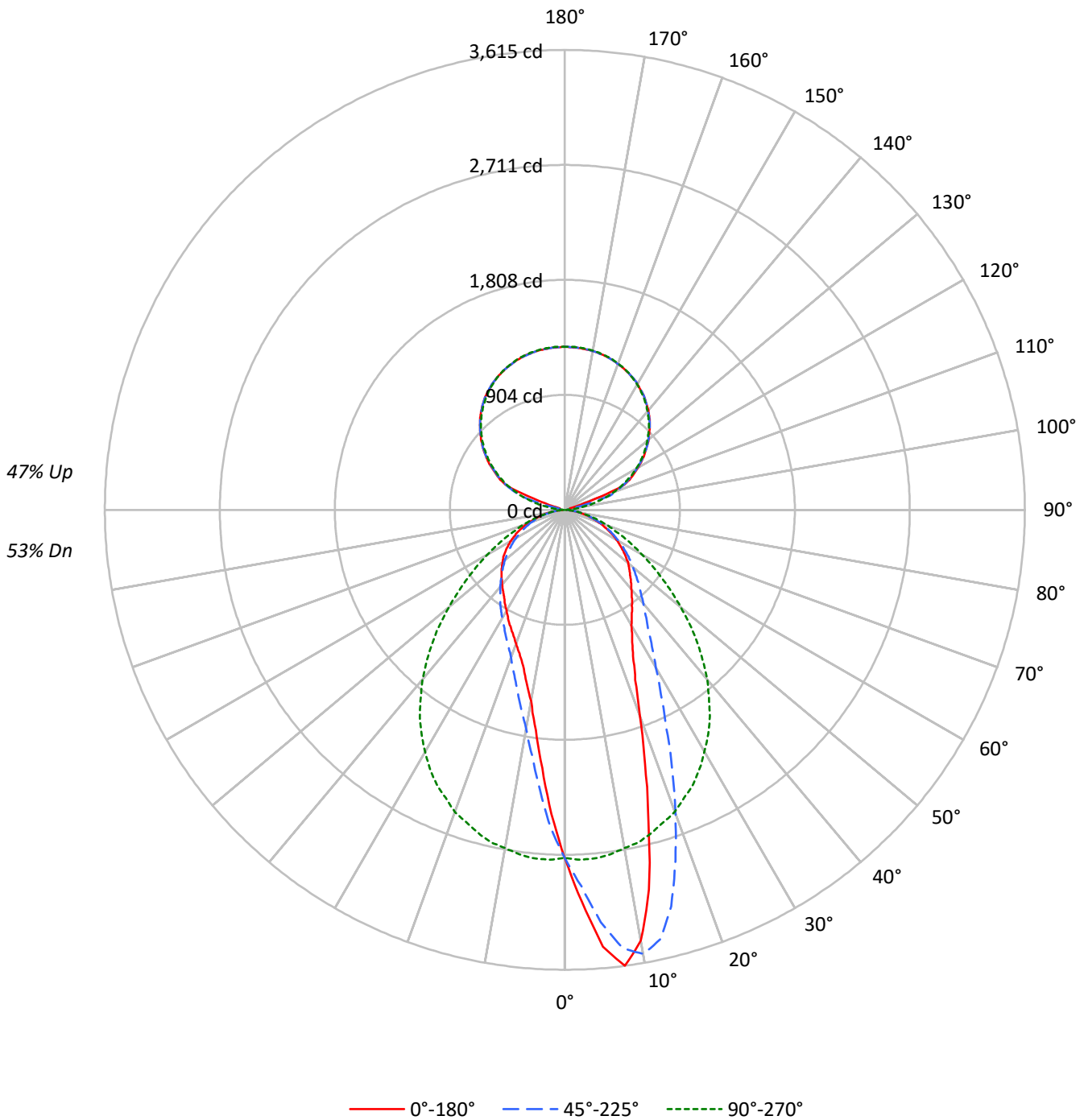
Lumens per Lamp: N/A
Luminaire Lumens: 8307.9 lumens
Efficiency: N/A
Efficacy: 136.2 lumens/watt
Spacing Criteria (0/90/45): 0.65 / 1.19 / 0.89
Luminous Opening: Rectangular (W 4' x L: 0.25' x H: 0')
CIE Type: General Diffuse

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°	29450	29450	29450	29450	29450
5°	37245	35152	29714	23945	22003
10°	37606	38743	29515	19087	16680
15°	28324	35972	29314	16164	14106
20°	19734	29108	28940	14136	12812
25°	15049	22384	28302	13005	12018
30°	13018	17784	27283	12205	11378
35°	12079	15014	26108	11628	10927
40°	11435	13468	24458	11078	10775
45°	11055	12466	22360	10648	10707
50°	10865	11672	19879	10258	10652
55°	10460	11091	17440	9888	10699
60°	10086	10469	15033	9539	10523
65°	9475	9880	12967	9167	10315
70°	8749	9130	11028	8551	9709
75°	7918	8185	9453	7948	8871
80°	6533	7159	7476	6924	7476
85°	5175	5805	5483	5879	5953

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 80°
 Vertical Angle: 45°
 Luminance: 25530 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	258.7	3.1
10°-20°	643.5	7.7
20°-30°	761.9	9.2
30°-40°	766.1	9.2
40°-50°	702.9	8.5
50°-60°	580.1	7.0
60°-70°	410.4	4.9
70°-80°	219.1	2.6
80°-90°	58.1	0.7
90°-100°	45.2	0.5
100°-110°	218.5	2.6
110°-120°	535.5	6.4
120°-130°	679.8	8.2
130°-140°	726.2	8.7
140°-150°	679.1	8.2
150°-160°	547.7	6.6
160°-170°	353.5	4.3
170°-180°	121.8	1.5
0°-30°	1664.1	20.0
0°-40°	2430.2	29.3
0°-60°	3713.2	44.7
0°-90°	4400.7	53.0
90°-120°	799.1	9.6
90°-150°	2884.2	34.7
90°-180°	3907.0	47.0
0°-180°	8307.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2736	2736	2736	2736	2736	
5°	3447	3253	2750	2216	2036	328
15°	2542	3228	2631	1450	1266	702
25°	1267	1885	2383	1095	1012	598
35°	919	1143	1987	885	832	578
45°	726	819	1469	700	703	562
55°	557	591	929	527	570	499
65°	372	388	509	360	405	370
75°	190	197	227	191	213	200
85°	42	47	44	48	48	47
90°	29	23	1	23	29	15
95°	36	30	58	30	36	30
105°	42	208	284	208	42	87
115°	560	547	532	547	560	527
125°	766	762	750	762	766	684
135°	944	944	934	944	944	728
145°	1088	1086	1078	1086	1088	680
155°	1186	1186	1187	1186	1186	547
165°	1249	1248	1252	1248	1249	353
175°	1277	1278	1282	1278	1277	122
180°	1282	1282	1282	1282	1282	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	2736.0	2736.0	2736.0	2736.0	2736.0	2736.0	2736.0	2736.0	2736.0	2736.0	2736.0
2.5°	3083.9	3080.7	3077.5	3061.6	3045.8	3038.2	3030.5	3007.7	2984.8	2959.4	2934.0
5°	3447.0	3455.9	3464.7	3454.6	3444.4	3413.3	3382.2	3341.0	3299.7	3253.3	3207.0
7.5°	3614.6	3619.6	3624.7	3618.4	3612.0	3603.8	3595.5	3558.7	3521.9	3474.3	3426.6
10°	3440.6	3452.0	3463.5	3488.2	3513.0	3540.9	3568.8	3563.8	3558.7	3544.7	3530.8
12.5°	3058.5	3072.4	3086.4	3135.9	3185.4	3248.9	3312.4	3367.0	3421.6	3459.7	3497.7
15°	2541.7	2580.5	2619.2	2664.3	2709.3	2802.6	2896.0	3010.9	3125.8	3228.0	3330.2
17.5°	2093.6	2108.2	2122.8	2171.0	2219.3	2336.7	2454.1	2586.8	2719.5	2889.0	3058.5
20°	1722.8	1736.2	1749.5	1813.0	1876.5	1968.5	2060.6	2209.7	2358.9	2541.1	2723.3
22.5°	1447.3	1468.3	1489.2	1524.8	1560.3	1648.6	1736.8	1869.5	2002.2	2203.4	2404.6
25°	1267.1	1282.3	1297.5	1319.1	1340.7	1411.2	1481.6	1590.8	1700.0	1884.7	2069.4
27.5°	1143.9	1150.3	1156.6	1178.2	1199.8	1245.5	1291.2	1385.1	1479.1	1635.9	1792.7
30°	1047.4	1051.9	1056.3	1075.4	1094.4	1125.5	1156.6	1224.5	1292.5	1430.8	1569.2
32.5°	980.1	983.3	986.5	1001.1	1015.7	1037.9	1060.1	1109.6	1159.1	1273.4	1387.7
35°	919.2	921.1	923.0	933.8	944.6	961.1	977.6	1015.0	1052.5	1142.6	1232.8
37.5°	865.9	868.4	870.9	877.3	883.6	898.2	912.8	942.7	972.5	1041.7	1110.9
40°	813.8	818.3	822.7	827.1	831.6	843.6	855.7	878.6	901.4	958.5	1015.7
42.5°	769.4	773.8	778.3	780.2	782.1	789.1	796.0	817.0	837.9	880.5	923.0
45°	726.2	728.1	730.0	731.9	733.8	739.5	745.3	763.7	782.1	818.9	855.7
47.5°	686.9	686.9	686.9	688.1	689.4	694.5	699.5	712.9	726.2	754.8	783.3
50°	648.8	648.8	648.8	646.9	645.0	648.1	651.3	661.5	671.6	697.0	722.4
52.5°	603.1	603.1	603.1	603.7	604.3	604.3	604.3	613.2	622.1	645.0	667.8
55°	557.4	559.9	562.4	560.5	558.6	559.9	561.2	566.9	572.6	591.0	609.4
57.5°	511.6	512.9	514.2	513.6	512.9	513.6	514.2	519.3	524.3	538.3	552.3
60°	468.5	468.5	468.5	467.2	465.9	467.2	468.5	471.0	473.6	486.3	499.0
62.5°	420.2	420.9	421.5	422.1	422.8	421.5	420.2	423.4	426.6	436.1	445.6
65°	372.0	372.6	373.3	375.2	377.1	375.8	374.5	377.7	380.9	387.9	394.8
67.5°	328.8	327.6	326.3	326.9	327.6	329.5	331.4	332.0	332.6	340.3	347.9
70°	278.0	279.3	280.6	279.9	279.3	279.9	280.6	282.5	284.4	290.1	295.8
72.5°	232.3	233.0	233.6	233.6	233.6	234.9	236.1	238.0	240.0	243.1	246.3
75°	190.4	190.4	190.4	191.7	193.0	193.6	194.2	194.2	194.2	196.8	199.3
77.5°	144.7	147.9	151.1	150.4	149.8	151.1	152.4	154.3	156.2	157.4	158.7
80°	105.4	105.4	105.4	106.0	106.6	108.6	110.5	111.7	113.0	115.5	118.1
82.5°	67.3	67.9	68.6	70.5	72.4	73.6	74.9	76.8	78.7	78.7	78.7
85°	41.9	40.6	39.4	40.6	41.9	43.2	44.4	45.1	45.7	47.0	48.2
87.5°	20.3	20.3	20.3	20.3	20.3	20.9	21.6	21.6	21.6	21.6	21.6
90°	28.6	28.1	27.7	27.3	26.9	26.2	25.4	24.5	23.7	22.9	20.1
92.5°	32.4	32.2	32.0	31.7	31.5	30.7	29.2	27.7	26.2	24.8	22.9
95°	36.2	36.2	36.2	36.2	36.2	35.4	34.0	32.5	31.0	29.5	27.2
97.5°	39.0	38.8	38.6	38.4	38.2	37.2	35.5	33.9	32.2	30.5	41.3
100°	40.0	39.8	39.6	39.4	39.1	38.2	36.5	34.8	33.1	31.4	64.4
102.5°	40.9	40.5	40.1	39.7	39.3	42.5	49.5	56.5	63.5	70.5	107.3
105°	41.9	41.5	41.1	40.6	40.2	58.7	96.2	133.6	171.1	208.5	227.6
107.5°	99.0	126.8	154.5	182.2	209.9	240.1	272.7	305.2	337.8	370.4	367.2
110°	261.9	292.1	322.4	352.6	382.9	401.5	408.5	415.5	422.5	429.5	427.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	496.1	496.5	497.0	497.4	497.8	497.1	495.2	493.3	491.4	489.4	487.1
115°	559.9	559.1	558.2	557.4	556.5	555.0	552.9	550.8	548.7	546.6	544.7
117.5°	611.3	611.1	610.9	610.7	610.5	609.5	607.8	606.1	604.5	602.8	601.7
120°	664.7	664.7	664.7	664.7	664.7	663.8	662.1	660.4	658.7	657.0	656.4
122.5°	717.0	716.8	716.6	716.4	716.2	715.5	714.5	713.4	712.4	711.3	710.5
125°	765.6	765.2	764.7	764.3	763.9	763.5	763.1	762.6	762.2	761.8	760.9
127.5°	813.2	813.6	814.1	814.5	814.9	814.8	814.2	813.5	812.9	812.3	811.2
130°	858.9	859.3	859.8	860.2	860.6	860.4	859.5	858.7	857.9	857.0	856.2
132.5°	900.8	901.4	902.1	902.7	903.4	903.2	902.4	901.6	900.7	899.9	899.2
135°	943.7	944.3	944.9	945.6	946.2	946.2	945.6	944.9	944.3	943.7	942.8
137.5°	984.6	985.0	985.5	985.9	986.3	986.0	984.9	983.9	982.8	981.8	981.3
140°	1020.8	1021.2	1021.6	1022.1	1022.5	1022.3	1021.4	1020.6	1019.7	1018.9	1018.3
142.5°	1054.1	1054.8	1055.4	1056.0	1056.7	1056.7	1056.0	1055.4	1054.8	1054.1	1053.5
145°	1088.4	1088.4	1088.4	1088.4	1088.4	1088.2	1087.8	1087.3	1086.9	1086.5	1086.1
147.5°	1113.2	1114.2	1115.3	1116.3	1117.4	1117.7	1117.3	1116.9	1116.4	1116.0	1115.6
150°	1141.7	1142.4	1143.0	1143.6	1144.3	1144.4	1143.9	1143.5	1143.1	1142.7	1142.3
152.5°	1164.6	1165.6	1166.7	1167.8	1168.8	1168.9	1168.1	1167.2	1166.4	1165.5	1165.3
155°	1185.5	1186.8	1188.1	1189.3	1190.6	1190.7	1189.7	1188.6	1187.5	1186.5	1186.3
157.5°	1203.6	1205.3	1207.0	1208.7	1210.4	1210.6	1209.3	1208.1	1206.8	1205.5	1205.7
160°	1220.8	1222.2	1223.7	1225.2	1226.7	1226.8	1225.5	1224.3	1223.0	1221.7	1221.9
162.5°	1236.9	1238.2	1239.5	1240.8	1242.0	1241.9	1240.4	1239.0	1237.5	1236.0	1236.2
165°	1249.3	1250.8	1252.3	1253.8	1255.3	1255.1	1253.5	1251.8	1250.1	1248.4	1248.6
167.5°	1258.9	1260.5	1262.2	1263.9	1265.6	1265.6	1263.9	1262.2	1260.5	1258.9	1258.9
170°	1267.4	1269.1	1270.8	1272.5	1274.2	1274.2	1272.5	1270.8	1269.1	1267.4	1267.4
172.5°	1272.2	1274.1	1276.0	1277.9	1279.8	1279.9	1278.2	1276.5	1274.8	1273.1	1272.9
175°	1276.9	1278.6	1280.3	1282.0	1283.7	1283.8	1282.3	1280.9	1279.4	1277.9	1277.7
177.5°	1277.9	1280.0	1282.1	1284.2	1286.4	1286.6	1284.9	1283.2	1281.5	1279.8	1279.6
180°	1281.7	1281.7	1281.7	1281.7	1281.7	1281.7	1281.7	1281.7	1281.7	1281.7	1281.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	2736.0	2736.0	2736.0	2736.0	2736.0	2736.0	2736.0	2736.0	2736.0	2736.0	2736.0
2.5°	2926.4	2918.8	2890.9	2862.9	2831.2	2799.5	2776.0	2752.5	2717.6	2682.7	2654.1
5°	3171.5	3135.9	3076.9	3017.8	2937.9	2857.9	2803.9	2750.0	2677.6	2605.2	2547.5
7.5°	3365.7	3304.8	3222.2	3139.7	3035.0	2930.2	2831.2	2732.2	2621.7	2511.3	2421.1
10°	3489.5	3448.2	3353.0	3257.8	3117.5	2977.2	2838.8	2700.4	2558.2	2416.0	2296.7
12.5°	3501.6	3505.4	3417.8	3330.2	3171.5	3012.8	2844.5	2676.3	2497.3	2318.3	2179.3
15°	3395.5	3460.9	3412.7	3364.4	3204.5	3044.5	2837.6	2630.6	2424.3	2218.0	2057.4
17.5°	3198.8	3339.0	3346.0	3353.0	3193.0	3033.1	2803.9	2574.7	2341.1	2107.5	1938.7
20°	2930.2	3137.2	3208.3	3279.4	3149.2	3019.1	2772.8	2526.5	2265.0	2003.4	1826.3
22.5°	2656.0	2907.4	3037.5	3167.7	3071.2	2974.7	2712.5	2450.3	2174.2	1898.1	1718.4
25°	2343.7	2617.9	2817.9	3017.8	2958.8	2899.8	2641.4	2383.0	2089.1	1795.2	1611.8
27.5°	2071.4	2350.0	2591.3	2832.5	2819.8	2807.1	2550.6	2294.2	1993.3	1692.4	1515.3
30°	1828.9	2088.5	2358.3	2628.1	2659.2	2690.3	2442.7	2195.1	1893.6	1592.1	1421.3
32.5°	1614.3	1840.9	2130.4	2419.9	2480.8	2541.7	2318.3	2094.8	1796.5	1498.1	1333.7
35°	1438.5	1644.1	1933.6	2223.1	2299.2	2375.4	2181.2	1986.9	1696.2	1405.4	1248.7
37.5°	1282.9	1455.0	1737.4	2019.9	2113.2	2206.6	2032.6	1858.7	1586.4	1314.0	1169.9
40°	1154.1	1292.5	1552.1	1811.7	1919.6	2027.6	1884.1	1740.6	1482.3	1223.9	1091.2
42.5°	1046.2	1169.3	1404.8	1640.3	1743.8	1847.3	1726.0	1604.8	1375.0	1145.2	1023.9
45°	954.1	1052.5	1266.4	1480.4	1578.7	1677.1	1573.0	1468.9	1266.4	1063.9	950.9
47.5°	867.8	952.2	1135.0	1317.8	1405.4	1493.0	1411.8	1330.5	1159.1	987.7	885.5
50°	790.3	858.2	1018.2	1178.2	1254.4	1330.5	1258.8	1187.1	1046.2	905.2	816.4
52.5°	723.0	778.3	912.2	1046.2	1111.5	1176.9	1115.3	1053.8	942.0	830.3	752.9
55°	656.4	703.4	819.5	935.7	980.1	1024.6	977.0	929.3	839.2	749.1	683.7
57.5°	594.2	636.1	731.3	826.5	860.8	895.1	851.9	808.7	740.8	672.9	618.3
60°	533.2	567.5	646.9	726.2	747.2	768.1	733.2	698.3	650.7	603.1	554.2
62.5°	476.7	507.8	566.9	625.9	639.9	653.8	627.2	600.5	564.3	528.2	490.1
65°	418.3	441.8	490.1	538.3	547.2	556.1	532.6	509.1	481.8	454.5	426.6
67.5°	364.4	380.9	420.2	459.6	460.2	460.9	441.8	422.8	407.5	392.3	370.1
70°	311.7	327.6	353.6	379.6	380.2	380.9	365.6	350.4	339.0	327.6	311.1
72.5°	257.7	269.2	288.8	308.5	307.2	306.0	296.5	286.9	278.0	269.2	257.1
75°	208.8	218.4	231.7	245.0	241.2	237.4	232.3	227.3	219.6	212.0	204.4
77.5°	164.4	170.1	177.7	185.4	182.8	180.3	175.8	171.4	165.7	160.0	156.8
80°	120.6	123.2	128.2	133.3	132.0	130.8	125.7	120.6	119.3	118.1	113.6
82.5°	81.9	85.1	86.3	87.6	87.0	86.3	82.5	78.7	77.4	76.2	75.5
85°	48.9	49.5	50.1	50.8	48.9	47.0	45.7	44.4	44.4	44.4	43.8
87.5°	22.2	22.9	22.9	22.9	22.2	21.6	20.3	19.0	19.7	20.3	20.3
90°	17.4	14.6	11.8	9.4	7.3	5.2	3.1	1.0	3.1	5.2	7.3
92.5°	20.9	19.0	17.1	16.8	18.1	19.4	20.6	21.9	20.6	19.4	18.1
95°	24.9	22.5	20.2	23.4	32.1	40.7	49.4	58.1	49.4	40.7	32.1
97.5°	52.1	62.8	73.6	82.0	87.9	93.8	99.8	105.7	99.8	93.8	87.9
100°	97.4	130.5	163.5	177.9	173.6	169.4	165.2	160.9	165.2	169.4	173.6
102.5°	144.1	180.9	217.7	234.8	232.0	229.3	226.5	223.8	226.5	229.3	232.0
105°	246.6	265.7	284.7	293.1	290.7	288.4	286.1	283.8	286.1	288.4	290.7
107.5°	364.1	360.9	357.7	355.2	353.3	351.4	349.5	347.6	349.5	351.4	353.3
110°	424.8	422.5	420.1	418.1	416.4	414.7	413.1	411.4	413.1	414.7	416.4



TEST NUMBER: P831069

CATALOG NUMBER: S123DIP-S1000D1025U950-4F0-1E-UDD-G

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	484.8	482.5	480.1	478.2	476.8	475.3	473.8	472.3	473.8	475.3	476.8
115°	542.8	540.9	539.0	537.4	536.1	534.8	533.6	532.3	533.6	534.8	536.1
117.5°	600.6	599.6	598.5	597.3	595.8	594.3	592.8	591.3	592.8	594.3	595.8
120°	655.8	655.1	654.5	653.2	651.3	649.4	647.5	645.6	647.5	649.4	651.3
122.5°	709.6	708.8	707.9	706.8	705.3	703.8	702.3	700.8	702.3	703.8	705.3
125°	760.1	759.2	758.4	757.1	755.4	753.7	752.1	750.4	752.1	753.7	755.4
127.5°	810.1	809.1	808.0	806.6	805.0	803.3	801.6	799.9	801.6	803.3	805.0
130°	855.3	854.5	853.6	852.4	850.7	849.0	847.3	845.6	847.3	849.0	850.7
132.5°	898.6	898.0	897.3	896.2	894.5	892.8	891.1	889.4	891.1	892.8	894.5
135°	942.0	941.1	940.3	939.2	937.9	936.7	935.4	934.1	935.4	936.7	937.9
137.5°	980.9	980.5	980.1	979.0	977.3	975.6	973.9	972.2	973.9	975.6	977.3
140°	1017.6	1017.0	1016.3	1015.4	1014.1	1012.9	1011.6	1010.3	1011.6	1012.9	1014.1
142.5°	1052.9	1052.2	1051.6	1050.6	1049.4	1048.1	1046.8	1045.6	1046.8	1048.1	1049.4
145°	1085.7	1085.2	1084.8	1083.9	1082.4	1080.9	1079.4	1077.9	1079.4	1080.9	1082.4
147.5°	1115.2	1114.7	1114.3	1113.6	1112.5	1111.5	1110.4	1109.4	1110.4	1111.5	1112.5
150°	1141.8	1141.4	1141.0	1140.5	1139.8	1139.2	1138.6	1137.9	1138.6	1139.2	1139.8
152.5°	1165.1	1164.9	1164.7	1164.5	1164.3	1164.1	1163.8	1163.6	1163.8	1164.1	1164.3
155°	1186.1	1185.8	1185.6	1185.7	1186.2	1186.6	1187.0	1187.4	1187.0	1186.6	1186.2
157.5°	1205.9	1206.2	1206.4	1206.5	1206.5	1206.5	1206.5	1206.5	1206.5	1206.5	1206.5
160°	1222.1	1222.3	1222.6	1222.8	1223.0	1223.2	1223.4	1223.6	1223.4	1223.2	1223.0
162.5°	1236.4	1236.6	1236.8	1237.3	1237.9	1238.5	1239.2	1239.8	1239.2	1238.5	1237.9
165°	1248.8	1249.0	1249.2	1249.6	1250.3	1250.9	1251.6	1252.2	1251.6	1250.9	1250.3
167.5°	1258.9	1258.9	1258.9	1259.3	1260.1	1261.0	1261.8	1262.7	1261.8	1261.0	1260.1
170°	1267.4	1267.4	1267.4	1267.8	1268.7	1269.5	1270.4	1271.2	1270.4	1269.5	1268.7
172.5°	1272.7	1272.5	1272.3	1272.7	1273.8	1274.8	1275.9	1276.9	1275.9	1274.8	1273.8
175°	1277.5	1277.3	1277.0	1277.5	1278.5	1279.6	1280.6	1281.7	1280.6	1279.6	1278.5
177.5°	1279.4	1279.2	1279.0	1279.4	1280.4	1281.5	1282.6	1283.6	1282.6	1281.5	1280.4
180°	1281.7	1281.7	1281.7	1281.7	1281.7	1281.7	1281.7	1281.7	1281.7	1281.7	1281.7



TEST NUMBER: P831069

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CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	2736.0	2736.0	2736.0	2736.0	2736.0	2736.0	2736.0	2736.0	2736.0	2736.0	2736.0
2.5°	2625.5	2600.8	2576.0	2557.0	2537.9	2505.6	2473.2	2465.6	2457.9	2447.2	2436.4
5°	2489.7	2428.7	2367.8	2313.2	2258.6	2216.1	2173.6	2145.6	2117.7	2097.4	2077.1
7.5°	2331.0	2239.6	2148.2	2083.4	2018.7	1957.1	1895.5	1875.8	1856.2	1829.5	1802.8
10°	2177.4	2076.4	1975.5	1891.1	1806.6	1746.3	1686.0	1661.9	1637.8	1604.1	1570.5
12.5°	2040.2	1929.8	1819.3	1734.3	1649.2	1590.8	1532.4	1497.5	1462.6	1443.5	1424.5
15°	1896.8	1778.7	1660.6	1581.9	1503.2	1450.5	1397.8	1367.4	1336.9	1318.5	1300.1
17.5°	1769.8	1653.0	1536.2	1460.7	1385.1	1336.9	1288.6	1262.0	1235.3	1221.4	1207.4
20°	1649.2	1534.9	1420.7	1347.0	1273.4	1234.1	1194.7	1177.6	1160.4	1149.0	1137.6
22.5°	1538.8	1426.4	1314.0	1251.2	1188.3	1156.6	1124.9	1112.8	1100.7	1091.2	1081.7
25°	1428.3	1328.0	1227.7	1174.4	1121.1	1095.0	1069.0	1056.9	1044.9	1035.4	1025.8
27.5°	1338.2	1242.3	1146.4	1100.7	1055.0	1034.7	1014.4	1004.9	995.4	986.5	977.6
30°	1250.6	1164.9	1079.2	1039.8	1000.4	982.0	963.6	954.1	944.6	936.3	928.1
32.5°	1169.3	1095.7	1022.0	985.8	949.7	934.4	919.2	907.8	896.3	890.0	883.6
35°	1091.9	1025.8	959.8	930.0	900.1	884.9	869.7	860.2	850.6	845.6	840.5
37.5°	1025.8	966.8	907.8	879.2	850.6	836.0	821.4	813.2	804.9	803.0	801.1
40°	958.5	907.8	857.0	829.0	801.1	788.4	775.7	770.6	765.6	764.3	763.0
42.5°	902.7	853.2	803.7	778.3	752.9	742.1	731.3	728.8	726.2	728.1	730.0
45°	837.9	796.7	755.4	731.9	708.4	699.5	690.7	688.8	686.9	690.7	694.5
47.5°	783.3	745.3	707.2	684.9	662.7	656.4	650.0	649.4	648.8	653.8	658.9
50°	727.5	690.7	653.8	636.1	618.3	612.6	606.9	608.8	610.7	618.9	627.2
52.5°	675.4	641.1	606.9	590.4	573.9	570.1	566.2	570.7	575.1	584.0	592.9
55°	618.3	587.2	556.1	543.4	530.7	526.9	523.1	532.0	540.8	549.1	557.4
57.5°	563.7	536.4	509.1	497.7	486.3	485.6	485.0	493.2	501.5	510.4	519.3
60°	505.3	482.4	459.6	450.7	441.8	443.1	444.4	453.9	463.4	470.4	477.4
62.5°	452.0	432.9	413.9	405.6	397.4	400.6	403.7	413.3	422.8	431.0	439.3
65°	398.7	382.8	366.9	361.2	355.5	359.9	364.4	372.6	380.9	386.6	392.3
67.5°	347.9	334.5	321.2	316.8	312.3	316.8	321.2	329.5	337.7	343.4	349.1
70°	294.5	283.8	273.0	269.8	266.6	271.7	276.8	283.8	290.7	296.5	302.2
72.5°	245.0	236.8	228.5	227.9	227.3	231.7	236.1	243.1	250.1	253.9	257.7
75°	196.8	192.3	187.9	187.3	186.6	191.1	195.5	199.3	203.1	206.3	209.5
77.5°	153.6	149.8	146.0	146.6	147.3	150.4	153.6	157.4	161.2	163.1	165.0
80°	109.2	107.9	106.6	107.9	109.2	111.7	114.3	116.8	119.3	120.6	121.9
82.5°	74.9	73.6	72.4	74.3	76.2	78.1	80.0	81.9	83.8	84.4	85.1
85°	43.2	45.1	47.0	47.0	47.0	47.6	48.2	48.9	49.5	48.9	48.2
87.5°	20.3	20.9	21.6	21.6	21.6	22.2	22.9	22.9	22.9	22.2	21.6
90°	9.4	11.8	14.6	17.4	20.1	22.9	23.7	24.5	25.4	26.2	26.9
92.5°	16.8	17.1	19.0	20.9	22.9	24.8	26.2	27.7	29.2	30.7	31.5
95°	23.4	20.2	22.5	24.9	27.2	29.5	31.0	32.5	34.0	35.4	36.2
97.5°	82.0	73.6	62.8	52.1	41.3	30.5	32.2	33.9	35.5	37.2	38.2
100°	177.9	163.5	130.5	97.4	64.4	31.4	33.1	34.8	36.5	38.2	39.1
102.5°	234.8	217.7	180.9	144.1	107.3	70.5	63.5	56.5	49.5	42.5	39.3
105°	293.1	284.7	265.7	246.6	227.6	208.5	171.1	133.6	96.2	58.7	40.2
107.5°	355.2	357.7	360.9	364.1	367.2	370.4	337.8	305.2	272.7	240.1	209.9
110°	418.1	420.1	422.5	424.8	427.1	429.5	422.5	415.5	408.5	401.5	382.9



TEST NUMBER: P831069

CATALOG NUMBER: S123DIP-S1000D1025U950-4F0-1E-UDD-G

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	478.2	480.1	482.5	484.8	487.1	489.4	491.4	493.3	495.2	497.1	497.8
115°	537.4	539.0	540.9	542.8	544.7	546.6	548.7	550.8	552.9	555.0	556.5
117.5°	597.3	598.5	599.6	600.6	601.7	602.8	604.5	606.1	607.8	609.5	610.5
120°	653.2	654.5	655.1	655.8	656.4	657.0	658.7	660.4	662.1	663.8	664.7
122.5°	706.8	707.9	708.8	709.6	710.5	711.3	712.4	713.4	714.5	715.5	716.2
125°	757.1	758.4	759.2	760.1	760.9	761.8	762.2	762.6	763.1	763.5	763.9
127.5°	806.6	808.0	809.1	810.1	811.2	812.3	812.9	813.5	814.2	814.8	814.9
130°	852.4	853.6	854.5	855.3	856.2	857.0	857.9	858.7	859.5	860.4	860.6
132.5°	896.2	897.3	898.0	898.6	899.2	899.9	900.7	901.6	902.4	903.2	903.4
135°	939.2	940.3	941.1	942.0	942.8	943.7	944.3	944.9	945.6	946.2	946.2
137.5°	979.0	980.1	980.5	980.9	981.3	981.8	982.8	983.9	984.9	986.0	986.3
140°	1015.4	1016.3	1017.0	1017.6	1018.3	1018.9	1019.7	1020.6	1021.4	1022.3	1022.5
142.5°	1050.6	1051.6	1052.2	1052.9	1053.5	1054.1	1054.8	1055.4	1056.0	1056.7	1056.7
145°	1083.9	1084.8	1085.2	1085.7	1086.1	1086.5	1086.9	1087.3	1087.8	1088.2	1088.4
147.5°	1113.6	1114.3	1114.7	1115.2	1115.6	1116.0	1116.4	1116.9	1117.3	1117.7	1117.4
150°	1140.5	1141.0	1141.4	1141.8	1142.3	1142.7	1143.1	1143.5	1143.9	1144.4	1144.3
152.5°	1164.5	1164.7	1164.9	1165.1	1165.3	1165.5	1166.4	1167.2	1168.1	1168.9	1168.8
155°	1185.7	1185.6	1185.8	1186.1	1186.3	1186.5	1187.5	1188.6	1189.7	1190.7	1190.6
157.5°	1206.5	1206.4	1206.2	1205.9	1205.7	1205.5	1206.8	1208.1	1209.3	1210.6	1210.4
160°	1222.8	1222.6	1222.3	1222.1	1221.9	1221.7	1223.0	1224.3	1225.5	1226.8	1226.7
162.5°	1237.3	1236.8	1236.6	1236.4	1236.2	1236.0	1237.5	1239.0	1240.4	1241.9	1242.0
165°	1249.6	1249.2	1249.0	1248.8	1248.6	1248.4	1250.1	1251.8	1253.5	1255.1	1255.3
167.5°	1259.3	1258.9	1258.9	1258.9	1258.9	1258.9	1260.5	1262.2	1263.9	1265.6	1265.6
170°	1267.8	1267.4	1267.4	1267.4	1267.4	1267.4	1269.1	1270.8	1272.5	1274.2	1274.2
172.5°	1272.7	1272.3	1272.5	1272.7	1272.9	1273.1	1274.8	1276.5	1278.2	1279.9	1279.8
175°	1277.5	1277.0	1277.3	1277.5	1277.7	1277.9	1279.4	1280.9	1282.3	1283.8	1283.7
177.5°	1279.4	1279.0	1279.2	1279.4	1279.6	1279.8	1281.5	1283.2	1284.9	1286.6	1286.4
180°	1281.7	1281.7	1281.7	1281.7	1281.7	1281.7	1281.7	1281.7	1281.7	1281.7	1281.7



TEST NUMBER: P831069

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CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	2736.0	2736.0	2736.0	2736.0
2.5°	2431.9	2427.5	2409.7	2391.9
5°	2061.8	2046.6	2041.5	2036.4
7.5°	1801.6	1800.3	1773.6	1747.0
10°	1572.4	1574.3	1550.2	1526.1
12.5°	1408.6	1392.8	1390.8	1388.9
15°	1285.5	1270.9	1268.3	1265.8
17.5°	1198.5	1189.6	1187.1	1184.5
20°	1132.5	1127.4	1123.0	1118.5
22.5°	1075.4	1069.0	1065.2	1061.4
25°	1020.1	1014.4	1013.1	1011.9
27.5°	970.6	963.6	963.6	963.6
30°	923.6	919.2	917.3	915.4
32.5°	879.8	876.0	876.0	876.0
35°	838.6	836.7	834.1	831.6
37.5°	801.1	801.1	799.8	798.6
40°	764.9	766.8	766.8	766.8
42.5°	731.9	733.8	733.8	733.8
45°	697.6	700.8	702.1	703.4
47.5°	664.0	669.1	670.3	671.6
50°	631.0	634.8	635.4	636.1
52.5°	597.3	601.8	605.0	608.1
55°	561.8	566.2	568.1	570.1
57.5°	523.7	528.2	528.8	529.4
60°	481.8	486.3	487.5	488.8
62.5°	441.8	444.4	445.6	446.9
65°	396.1	399.9	402.5	405.0
67.5°	352.3	355.5	355.5	355.5
70°	303.4	304.7	306.6	308.5
72.5°	258.4	259.0	259.0	259.0
75°	210.8	212.0	212.7	213.3
77.5°	165.7	166.3	166.3	166.3
80°	121.2	120.6	120.6	120.6
82.5°	83.2	81.3	81.3	81.3
85°	47.6	47.0	47.6	48.2
87.5°	21.6	21.6	21.6	21.6
90°	27.3	27.7	28.1	28.6
92.5°	31.7	32.0	32.2	32.4
95°	36.2	36.2	36.2	36.2
97.5°	38.4	38.6	38.8	39.0
100°	39.4	39.6	39.8	40.0
102.5°	39.7	40.1	40.5	40.9
105°	40.6	41.1	41.5	41.9
107.5°	182.2	154.5	126.8	99.0
110°	352.6	322.4	292.1	261.9



TEST NUMBER: P831069

CATALOG NUMBER: S123DIP-S1000D1025U950-4F0-1E-UDD-G

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
112.5°	497.4	497.0	496.5	496.1
115°	557.4	558.2	559.1	559.9
117.5°	610.7	610.9	611.1	611.3
120°	664.7	664.7	664.7	664.7
122.5°	716.4	716.6	716.8	717.0
125°	764.3	764.7	765.2	765.6
127.5°	814.5	814.1	813.6	813.2
130°	860.2	859.8	859.3	858.9
132.5°	902.7	902.1	901.4	900.8
135°	945.6	944.9	944.3	943.7
137.5°	985.9	985.5	985.0	984.6
140°	1022.1	1021.6	1021.2	1020.8
142.5°	1056.0	1055.4	1054.8	1054.1
145°	1088.4	1088.4	1088.4	1088.4
147.5°	1116.3	1115.3	1114.2	1113.2
150°	1143.6	1143.0	1142.4	1141.7
152.5°	1167.8	1166.7	1165.6	1164.6
155°	1189.3	1188.1	1186.8	1185.5
157.5°	1208.7	1207.0	1205.3	1203.6
160°	1225.2	1223.7	1222.2	1220.8
162.5°	1240.8	1239.5	1238.2	1236.9
165°	1253.8	1252.3	1250.8	1249.3
167.5°	1263.9	1262.2	1260.5	1258.9
170°	1272.5	1270.8	1269.1	1267.4
172.5°	1277.9	1276.0	1274.1	1272.2
175°	1282.0	1280.3	1278.6	1276.9
177.5°	1284.2	1282.1	1280.0	1277.9
180°	1281.7	1281.7	1281.7	1281.7



TEST NUMBER: P831069

CATALOG NUMBER: S123DIP-S1000D1025U950-4F0-1E-UDD-G

CIE UGR TABLE:

Reflectances:											
Ceiling		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference plane		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		Viewed crosswise					Viewed endwise				
X=2H	Y=2H	15.59	16.44	16.53	17.39	18.63	17.83	18.68	18.77	19.63	20.86
	3H	17.24	18.00	18.19	18.96	20.22	19.25	20.02	20.21	20.98	22.23
	4H	17.82	18.54	18.78	19.50	20.76	19.70	20.42	20.67	21.39	22.65
	6H	18.19	18.85	19.16	19.82	21.10	19.98	20.64	20.96	21.61	22.89
	8H	18.28	18.91	19.27	19.90	21.17	20.04	20.67	21.02	21.66	22.93
	12H	18.33	18.93	19.32	19.91	21.20	20.06	20.66	21.05	21.64	22.94
4H	2H	16.17	16.89	17.14	17.85	19.12	17.99	18.71	18.96	19.68	20.94
	3H	18.00	18.59	18.98	19.59	20.87	19.61	20.21	20.59	21.20	22.48
	4H	18.69	19.24	19.68	20.23	21.53	20.19	20.74	21.18	21.73	23.03
	6H	19.17	19.64	20.17	20.65	21.95	20.60	21.07	21.60	22.08	23.38
	8H	19.30	19.74	20.31	20.75	22.06	20.71	21.15	21.71	22.15	23.47
	12H	19.37	19.77	20.39	20.79	22.11	20.75	21.15	21.77	22.17	23.49
8H	4H	18.96	19.40	19.96	20.40	21.72	20.30	20.74	21.30	21.74	23.06
	6H	19.55	19.91	20.57	20.96	22.27	20.80	21.16	21.83	22.21	23.52
	8H	19.75	20.07	20.79	21.11	22.44	20.98	21.30	22.01	22.33	23.66
	12H	19.88	20.16	20.91	21.18	22.56	21.08	21.36	22.12	22.39	23.76
12H	4H	18.96	19.35	19.98	20.37	21.69	20.27	20.67	21.29	21.69	23.01
	6H	19.60	19.92	20.63	20.95	22.28	20.82	21.13	21.85	22.17	23.50
	8H	19.83	20.11	20.87	21.14	22.51	21.01	21.30	22.05	22.32	23.70