

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: P831586

Luminaire Tested: S123DIP-S775D1025U830-4F0-1E-UDD-G1

Issue Date: 05/03/2024

Test Information

Test Method: LM-79-2019
Report Number: P831586
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2301-905-1, G3-1807-864-9)
Test Lab: INNOVATION CENTER
Issue Date: 05/03/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123DIP-S775D1025U830-4F0-1E-UDD-G1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, GRAZE OPTIC
UPLIGHT 1025 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: -

Summary

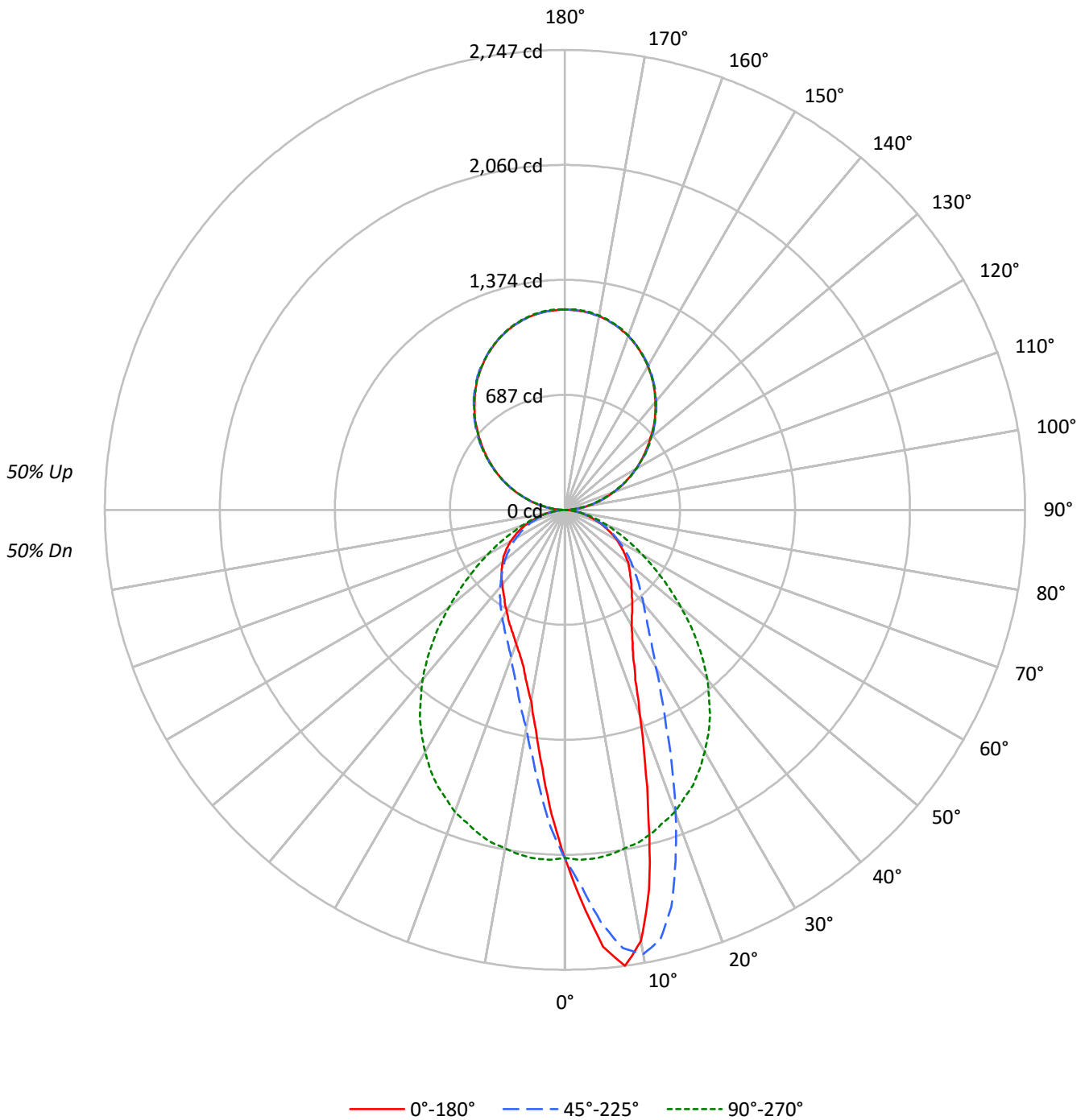
Lumens per Lamp: N/A
Luminaire Lumens: 6664.1 lumens
Efficiency: N/A
Efficacy: 128.7 lumens/watt
Spacing Criteria (0/90/45): 0.65 / 1.19 / 0.89
Luminous Opening: Rectangular (W 4' x L: 0.25' x H: 0')
CIE Type: General Diffuse

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	107	107	107	107	99	99	99	99	83	83	83	69	69	69	56	56	56	50				
1	98	94	90	87	91	87	84	81	74	72	70	62	60	59	51	49	49	43				
2	90	83	77	72	83	77	72	67	65	62	58	55	52	50	45	43	42	37				
3	83	73	66	61	76	68	62	57	58	54	50	49	46	43	41	38	36	32				
4	76	65	58	52	70	61	54	49	52	47	43	44	40	37	37	34	32	28				
5	70	59	51	45	64	55	48	43	47	42	38	40	36	33	33	31	28	25				
6	65	53	45	40	60	49	43	37	43	37	33	37	32	29	31	28	25	22				
7	60	48	40	35	55	45	38	33	39	34	30	34	29	26	28	25	23	20				
8	56	44	36	31	52	41	34	30	36	31	27	31	27	24	26	23	21	18				
9	52	40	33	28	48	38	31	27	33	28	24	29	25	22	24	21	19	17				
10	49	37	30	26	45	35	29	24	31	26	22	27	23	20	23	20	17	16				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	22385	22385	22385	22385	22385
5°	28309	26719	22585	18200	16725
10°	28584	29449	22435	14508	12678
15°	21528	27341	22282	12286	10721
20°	15000	22125	21998	10745	9739
25°	11438	17013	21512	9885	9134
30°	9895	13518	20738	9277	8648
35°	9181	11412	19845	8838	8306
40°	8692	10238	18590	8421	8190
45°	8403	9474	16996	8094	8138
50°	8257	8872	15110	7797	8097
55°	7949	8430	13257	7516	8131
60°	7666	7957	11427	7251	7998
65°	7200	7508	9857	6968	7840
70°	6650	6939	8381	6499	7380
75°	6022	6222	7182	6039	6742
80°	4965	5442	5684	5263	5684
85°	3927	4409	4174	4471	4533

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 80°
 Vertical Angle: 45°
 Luminance: 19406 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	196.6	3.0
10°-20°	489.1	7.3
20°-30°	579.1	8.7
30°-40°	582.3	8.7
40°-50°	534.2	8.0
50°-60°	440.9	6.6
60°-70°	311.9	4.7
70°-80°	166.5	2.5
80°-90°	44.8	0.7
90°-100°	77.1	1.2
100°-110°	233.4	3.5
110°-120°	397.3	6.0
120°-130°	522.6	7.8
130°-140°	587.5	8.8
140°-150°	577.5	8.7
150°-160°	486.2	7.3
160°-170°	323.7	4.9
170°-180°	113.3	1.7
0°-30°	1264.8	19.0
0°-40°	1847.1	27.7
0°-60°	2822.3	42.4
0°-90°	3345.5	50.2
90°-120°	707.7	10.6
90°-150°	2395.3	35.9
90°-180°	3319.0	49.8
0°-180°	6664.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2080	2080	2080	2080	2080	
5°	2620	2473	2090	1684	1548	250
15°	1932	2454	2000	1102	962	534
25°	963	1432	1811	832	769	455
35°	699	868	1510	673	632	439
45°	552	622	1116	532	535	427
55°	424	449	706	400	433	379
65°	283	295	387	274	308	281
75°	145	150	173	145	162	152
85°	32	36	34	36	37	36
90°	28	23	1	23	28	15
95°	73	70	56	70	73	74
105°	224	222	212	222	224	237
115°	401	401	400	401	401	397
125°	579	586	585	586	579	517
135°	758	764	759	764	758	583
145°	921	926	921	926	921	575
155°	1053	1056	1055	1056	1053	485
165°	1145	1146	1149	1146	1145	323
175°	1190	1191	1195	1191	1190	113
180°	1198	1198	1198	1198	1198	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	2079.6	2079.6	2079.6	2079.6	2079.6	2079.6	2079.6	2079.6	2079.6	2079.6	2079.6
2.5°	2344.0	2341.6	2339.2	2327.1	2315.0	2309.3	2303.5	2286.1	2268.7	2249.4	2230.1
5°	2620.0	2626.7	2633.5	2625.8	2618.1	2594.4	2570.8	2539.4	2508.0	2472.8	2437.6
7.5°	2747.4	2751.2	2755.1	2750.3	2745.4	2739.2	2732.9	2704.9	2676.9	2640.7	2604.5
10°	2615.2	2623.8	2632.5	2651.3	2670.2	2691.4	2712.6	2708.8	2704.9	2694.3	2683.7
12.5°	2324.7	2335.3	2345.9	2383.6	2421.2	2469.4	2517.7	2559.2	2600.7	2629.6	2658.6
15°	1931.9	1961.4	1990.8	2025.1	2059.3	2130.2	2201.2	2288.5	2375.8	2453.5	2531.2
17.5°	1591.3	1602.4	1613.5	1650.2	1686.8	1776.1	1865.4	1966.2	2067.0	2195.9	2324.7
20°	1309.5	1319.6	1329.8	1378.0	1426.3	1496.2	1566.2	1679.6	1793.0	1931.5	2069.9
22.5°	1100.1	1116.0	1131.9	1159.0	1186.0	1253.1	1320.1	1421.0	1521.8	1674.8	1827.7
25°	963.1	974.7	986.2	1002.6	1019.0	1072.6	1126.2	1209.1	1292.1	1432.5	1573.0
27.5°	869.5	874.3	879.1	895.5	911.9	946.7	981.4	1052.8	1124.2	1243.4	1362.6
30°	796.1	799.5	802.9	817.4	831.8	855.5	879.1	930.7	982.4	1087.6	1192.7
32.5°	745.0	747.4	749.8	760.9	772.0	788.9	805.8	843.4	881.0	967.9	1054.7
35°	698.7	700.1	701.6	709.8	718.0	730.5	743.1	771.5	800.0	868.5	937.0
37.5°	658.1	660.1	662.0	666.8	671.6	682.7	693.8	716.5	739.2	791.8	844.4
40°	618.6	621.9	625.3	628.7	632.1	641.2	650.4	667.8	685.2	728.6	772.0
42.5°	584.8	588.2	591.5	593.0	594.4	599.7	605.1	621.0	636.9	669.2	701.6
45°	552.0	553.4	554.9	556.3	557.8	562.1	566.5	580.4	594.4	622.4	650.4
47.5°	522.1	522.1	522.1	523.0	524.0	527.9	531.7	541.8	552.0	573.7	595.4
50°	493.1	493.1	493.1	491.7	490.2	492.6	495.0	502.8	510.5	529.8	549.1
52.5°	458.4	458.4	458.4	458.9	459.3	459.3	459.3	466.1	472.9	490.2	507.6
55°	423.6	425.6	427.5	426.0	424.6	425.6	426.5	430.9	435.2	449.2	463.2
57.5°	388.9	389.9	390.8	390.3	389.9	390.3	390.8	394.7	398.5	409.2	419.8
60°	356.1	356.1	356.1	355.1	354.2	355.1	356.1	358.0	359.9	369.6	379.2
62.5°	319.4	319.9	320.4	320.9	321.3	320.4	319.4	321.8	324.2	331.5	338.7
65°	282.7	283.2	283.7	285.2	286.6	285.6	284.7	287.1	289.5	294.8	300.1
67.5°	249.9	249.0	248.0	248.5	249.0	250.4	251.9	252.3	252.8	258.6	264.4
70°	211.3	212.3	213.3	212.8	212.3	212.8	213.3	214.7	216.2	220.5	224.8
72.5°	176.6	177.1	177.6	177.6	177.6	178.5	179.5	180.9	182.4	184.8	187.2
75°	144.8	144.8	144.8	145.7	146.7	147.2	147.6	147.6	147.6	149.6	151.5
77.5°	110.0	112.4	114.8	114.4	113.9	114.8	115.8	117.2	118.7	119.7	120.6
80°	80.1	80.1	80.1	80.6	81.1	82.5	84.0	84.9	85.9	87.8	89.7
82.5°	51.1	51.6	52.1	53.6	55.0	56.0	56.9	58.4	59.8	59.8	59.8
85°	31.8	30.9	29.9	30.9	31.8	32.8	33.8	34.3	34.7	35.7	36.7
87.5°	15.4	15.4	15.4	15.4	15.4	15.9	16.4	16.4	16.4	16.4	16.4
90°	28.2	27.8	27.4	27.0	26.6	25.9	25.1	24.3	23.4	22.6	19.9
92.5°	40.5	40.9	41.3	41.7	42.1	42.0	41.4	40.8	40.1	39.5	38.3
95°	73.4	73.4	73.4	73.4	73.4	73.0	72.1	71.3	70.5	69.6	68.0
97.5°	105.4	105.6	105.8	106.0	106.2	105.8	104.7	103.7	102.7	101.6	100.4
100°	143.0	142.6	142.2	141.8	141.3	140.8	140.2	139.6	138.9	138.3	137.3
102.5°	181.6	181.8	182.0	182.2	182.4	182.2	181.6	181.0	180.3	179.7	178.2
105°	223.9	223.5	223.1	222.7	222.3	222.0	222.0	222.0	222.0	222.0	220.2
107.5°	267.2	267.4	267.6	267.8	268.0	267.8	267.2	266.6	265.9	265.3	264.5
110°	311.4	311.8	312.3	312.7	313.1	312.9	312.0	311.2	310.4	309.5	309.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	358.5	358.5	358.5	358.5	358.5	357.9	356.9	355.9	354.8	353.8	353.8
115°	400.8	401.0	401.2	401.4	401.6	401.6	401.4	401.2	401.0	400.8	401.2
117.5°	444.1	444.7	445.3	446.0	446.6	446.9	446.9	446.9	446.9	446.9	447.3
120°	490.2	490.6	491.0	491.4	491.9	492.2	492.4	492.6	492.8	493.0	494.1
122.5°	534.4	535.0	535.7	536.3	536.9	537.5	538.2	538.8	539.4	540.0	540.5
125°	578.6	579.5	580.3	581.1	582.0	582.8	583.6	584.5	585.3	586.2	586.6
127.5°	622.8	623.7	624.5	625.4	626.2	627.2	628.5	629.7	631.0	632.3	632.7
130°	666.1	667.6	669.1	670.5	672.0	673.1	674.0	674.8	675.6	676.5	677.1
132.5°	711.3	712.3	713.4	714.4	715.5	716.5	717.6	718.6	719.6	720.7	721.1
135°	758.3	758.7	759.2	759.6	760.0	760.6	761.5	762.3	763.1	764.0	764.2
137.5°	799.7	800.4	801.0	801.6	802.2	803.1	804.1	805.2	806.2	807.3	806.6
140°	840.2	841.6	843.1	844.6	846.0	846.9	847.1	847.3	847.5	847.7	847.5
142.5°	881.6	882.6	883.7	884.7	885.8	886.4	886.6	886.8	887.0	887.2	886.8
145°	921.1	921.9	922.8	923.6	924.4	925.0	925.2	925.4	925.6	925.8	925.2
147.5°	956.8	958.1	959.4	960.6	961.9	962.5	962.5	962.5	962.5	962.5	961.9
150°	990.7	992.0	993.2	994.5	995.7	996.4	996.4	996.4	996.4	996.4	995.9
152.5°	1023.6	1024.7	1025.7	1026.8	1027.8	1028.1	1027.7	1027.3	1026.9	1026.5	1026.3
155°	1052.8	1054.3	1055.7	1057.2	1058.7	1059.0	1058.1	1057.3	1056.5	1055.6	1055.4
157.5°	1080.1	1081.4	1082.6	1083.9	1085.1	1085.3	1084.5	1083.7	1082.8	1082.0	1081.8
160°	1106.4	1107.3	1108.1	1109.0	1109.8	1109.7	1108.6	1107.6	1106.5	1105.5	1105.5
162.5°	1126.2	1127.7	1129.1	1130.6	1132.1	1132.3	1131.2	1130.2	1129.1	1128.1	1127.9
165°	1145.0	1146.5	1147.9	1149.4	1150.9	1151.0	1149.7	1148.5	1147.2	1146.0	1146.0
167.5°	1162.0	1163.2	1164.5	1165.7	1167.0	1167.0	1165.7	1164.5	1163.2	1162.0	1161.7
170°	1174.2	1175.6	1177.1	1178.6	1180.0	1180.0	1178.6	1177.1	1175.6	1174.2	1174.2
172.5°	1183.6	1185.1	1186.5	1188.0	1189.4	1189.6	1188.3	1187.0	1185.8	1184.5	1184.5
175°	1190.2	1191.6	1193.1	1194.6	1196.0	1196.1	1194.9	1193.6	1192.4	1191.1	1191.1
177.5°	1193.9	1195.4	1196.9	1198.3	1199.8	1199.9	1198.6	1197.4	1196.1	1194.9	1194.9
180°	1197.7	1197.7	1197.7	1197.7	1197.7	1197.7	1197.7	1197.7	1197.7	1197.7	1197.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	2079.6	2079.6	2079.6	2079.6	2079.6	2079.6	2079.6	2079.6	2079.6	2079.6	2079.6
2.5°	2224.3	2218.5	2197.3	2176.1	2152.0	2127.8	2110.0	2092.1	2065.6	2039.1	2017.3
5°	2410.6	2383.6	2338.7	2293.8	2233.0	2172.2	2131.2	2090.2	2035.2	1980.2	1936.3
7.5°	2558.2	2511.9	2449.2	2386.5	2306.8	2227.2	2152.0	2076.7	1992.7	1908.8	1840.3
10°	2652.3	2620.9	2548.6	2476.2	2369.6	2262.9	2157.7	2052.6	1944.5	1836.4	1745.7
12.5°	2661.5	2664.4	2597.8	2531.2	2410.6	2290.0	2162.1	2034.2	1898.2	1762.1	1656.4
15°	2580.9	2630.6	2593.9	2557.3	2435.7	2314.1	2156.8	1999.5	1842.7	1685.9	1563.8
17.5°	2431.3	2538.0	2543.3	2548.6	2427.0	2305.4	2131.2	1957.0	1779.5	1601.9	1473.6
20°	2227.2	2384.5	2438.6	2492.6	2393.7	2294.8	2107.6	1920.4	1721.6	1522.8	1388.2
22.5°	2018.8	2209.9	2308.8	2407.7	2334.3	2261.0	2061.7	1862.5	1652.6	1442.7	1306.1
25°	1781.4	1989.8	2141.8	2293.8	2248.9	2204.1	2007.7	1811.3	1587.9	1364.5	1225.1
27.5°	1574.4	1786.2	1969.6	2152.9	2143.3	2133.6	1938.7	1743.8	1515.1	1286.3	1151.7
30°	1390.1	1587.4	1792.5	1997.6	2021.2	2044.8	1856.7	1668.5	1439.3	1210.1	1080.3
32.5°	1227.0	1399.3	1619.3	1839.3	1885.6	1931.9	1762.1	1592.3	1365.5	1138.7	1013.7
35°	1093.3	1249.7	1469.7	1689.7	1747.6	1805.5	1657.9	1510.2	1289.2	1068.3	949.1
37.5°	975.1	1105.9	1320.6	1535.3	1606.2	1677.2	1545.0	1412.8	1205.8	998.8	889.3
40°	877.2	982.4	1179.7	1377.1	1459.1	1541.1	1432.1	1323.0	1126.6	930.3	829.4
42.5°	795.2	888.8	1067.8	1246.8	1325.4	1404.1	1311.9	1219.8	1045.1	870.4	778.3
45°	725.2	800.0	962.6	1125.2	1200.0	1274.8	1195.6	1116.5	962.6	808.7	722.8
47.5°	659.6	723.8	862.7	1001.7	1068.3	1134.8	1073.1	1011.3	881.0	750.8	673.1
50°	600.7	652.3	773.9	895.5	953.4	1011.3	956.8	902.3	795.2	688.0	620.5
52.5°	549.6	591.5	693.4	795.2	844.9	894.6	847.8	801.0	716.0	631.1	572.2
55°	498.9	534.6	622.9	711.2	745.0	778.8	742.6	706.4	637.9	569.4	519.7
57.5°	451.6	483.5	555.8	628.2	654.3	680.3	647.5	614.7	563.1	511.5	470.0
60°	405.3	431.4	491.7	552.0	567.9	583.8	557.3	530.8	494.6	458.4	421.2
62.5°	362.4	386.0	430.9	475.7	486.4	497.0	476.7	456.4	428.9	401.4	372.5
65°	318.0	335.8	372.5	409.2	415.9	422.7	404.8	387.0	366.2	345.5	324.2
67.5°	277.0	289.5	319.4	349.3	349.8	350.3	335.8	321.3	309.8	298.2	281.3
70°	236.9	249.0	268.8	288.5	289.0	289.5	277.9	266.3	257.7	249.0	236.4
72.5°	195.9	204.6	219.5	234.5	233.5	232.6	225.3	218.1	211.3	204.6	195.4
75°	158.7	166.0	176.1	186.2	183.4	180.5	176.6	172.7	166.9	161.2	155.4
77.5°	125.0	129.3	135.1	140.9	139.0	137.0	133.7	130.3	125.9	121.6	119.2
80°	91.7	93.6	97.5	101.3	100.4	99.4	95.5	91.7	90.7	89.7	86.4
82.5°	62.2	64.7	65.6	66.6	66.1	65.6	62.7	59.8	58.9	57.9	57.4
85°	37.2	37.6	38.1	38.6	37.2	35.7	34.7	33.8	33.8	33.8	33.3
87.5°	16.9	17.4	17.4	17.4	16.9	16.4	15.4	14.5	15.0	15.4	15.4
90°	17.1	14.4	11.7	9.3	7.2	5.1	3.0	0.9	3.0	5.1	7.2
92.5°	37.0	35.8	34.5	33.2	32.0	30.7	29.5	28.2	29.5	30.7	32.0
95°	66.3	64.6	62.9	61.4	59.9	58.4	57.0	55.5	57.0	58.4	59.9
97.5°	99.1	97.8	96.6	95.4	94.4	93.4	92.3	91.3	92.3	93.4	94.4
100°	136.2	135.2	134.1	133.0	131.7	130.5	129.2	128.0	129.2	130.5	131.7
102.5°	176.8	175.3	173.8	172.8	172.2	171.5	170.9	170.3	170.9	171.5	172.2
105°	218.3	216.4	214.5	213.4	212.9	212.5	212.1	211.7	212.1	212.5	212.9
107.5°	263.6	262.8	262.0	261.5	261.2	261.0	260.8	260.6	260.8	261.0	261.2
110°	308.7	308.3	307.9	307.5	307.0	306.6	306.2	305.8	306.2	306.6	307.0



TEST NUMBER: P831586

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	353.8	353.8	353.8	353.7	353.4	353.2	353.0	352.8	353.0	353.2	353.4
115°	401.6	402.1	402.5	402.4	401.7	401.1	400.5	399.9	400.5	401.1	401.7
117.5°	447.7	448.2	448.6	448.7	448.5	448.3	448.1	447.8	448.1	448.3	448.5
120°	495.1	496.1	497.2	497.1	495.8	494.6	493.3	492.1	493.3	494.6	495.8
122.5°	540.9	541.3	541.7	541.5	540.7	539.8	539.0	538.2	539.0	539.8	540.7
125°	587.0	587.4	587.8	587.7	587.1	586.5	585.8	585.2	585.8	586.5	587.1
127.5°	633.1	633.5	633.9	633.5	632.3	631.0	629.7	628.5	629.7	631.0	632.3
130°	677.7	678.4	679.0	678.5	676.8	675.1	673.4	671.8	673.4	675.1	676.8
132.5°	721.5	721.9	722.4	721.7	720.1	718.4	716.7	715.0	716.7	718.4	720.1
135°	764.4	764.6	764.8	764.3	763.0	761.8	760.5	759.3	760.5	761.8	763.0
137.5°	806.0	805.4	804.7	803.9	802.9	801.8	800.8	799.7	800.8	801.8	802.9
140°	847.3	847.1	846.9	846.2	845.2	844.2	843.1	842.1	843.1	844.2	845.2
142.5°	886.4	886.0	885.6	884.8	883.8	882.7	881.7	880.6	881.7	882.7	883.8
145°	924.5	923.9	923.3	922.8	922.4	921.9	921.5	921.1	921.5	921.9	922.4
147.5°	961.2	960.6	960.0	959.3	958.4	957.6	956.7	955.9	956.7	957.6	958.4
150°	995.5	995.1	994.7	994.3	993.9	993.4	993.0	992.6	993.0	993.4	993.9
152.5°	1026.1	1025.8	1025.6	1025.2	1024.6	1024.0	1023.3	1022.7	1023.3	1024.0	1024.6
155°	1055.2	1055.0	1054.8	1054.7	1054.7	1054.7	1054.7	1054.7	1054.7	1054.7	1054.7
157.5°	1081.6	1081.4	1081.1	1081.1	1081.4	1081.6	1081.8	1082.0	1081.8	1081.6	1081.4
160°	1105.5	1105.5	1105.5	1105.7	1106.1	1106.5	1107.0	1107.4	1107.0	1106.5	1106.1
162.5°	1127.7	1127.5	1127.2	1127.5	1128.1	1128.7	1129.3	1130.0	1129.3	1128.7	1128.1
165°	1146.0	1146.0	1146.0	1146.3	1146.9	1147.5	1148.2	1148.8	1148.2	1147.5	1146.9
167.5°	1161.5	1161.3	1161.1	1161.4	1162.3	1163.1	1163.9	1164.8	1163.9	1163.1	1162.3
170°	1174.2	1174.2	1174.2	1174.6	1175.4	1176.3	1177.1	1177.9	1177.1	1176.3	1175.4
172.5°	1184.5	1184.5	1184.5	1185.0	1185.8	1186.6	1187.5	1188.3	1187.5	1186.6	1185.8
175°	1191.1	1191.1	1191.1	1191.5	1192.4	1193.2	1194.0	1194.9	1194.0	1193.2	1192.4
177.5°	1194.9	1194.9	1194.9	1195.3	1196.1	1197.0	1197.8	1198.6	1197.8	1197.0	1196.1
180°	1197.7	1197.7	1197.7	1197.7	1197.7	1197.7	1197.7	1197.7	1197.7	1197.7	1197.7



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CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	2079.6	2079.6	2079.6	2079.6	2079.6	2079.6	2079.6	2079.6	2079.6	2079.6	2079.6
2.5°	1995.6	1976.8	1958.0	1943.5	1929.0	1904.4	1879.8	1874.0	1868.2	1860.0	1851.8
5°	1892.4	1846.1	1799.7	1758.2	1716.7	1684.4	1652.1	1630.9	1609.6	1594.2	1578.7
7.5°	1771.7	1702.3	1632.8	1583.6	1534.4	1487.6	1440.7	1425.8	1410.8	1390.6	1370.3
10°	1655.0	1578.3	1501.5	1437.4	1373.2	1327.4	1281.5	1263.2	1244.9	1219.3	1193.7
12.5°	1550.8	1466.8	1382.8	1318.2	1253.5	1209.1	1164.8	1138.2	1111.7	1097.2	1082.7
15°	1441.7	1352.0	1262.2	1202.4	1142.6	1102.5	1062.5	1039.3	1016.1	1002.2	988.2
17.5°	1345.2	1256.4	1167.7	1110.2	1052.8	1016.1	979.5	959.2	938.9	928.3	917.7
20°	1253.5	1166.7	1079.8	1023.9	967.9	938.0	908.1	895.0	882.0	873.3	864.6
22.5°	1169.6	1084.2	998.8	951.0	903.2	879.1	855.0	845.8	836.7	829.4	822.2
25°	1085.6	1009.4	933.2	892.6	852.1	832.3	812.5	803.4	794.2	787.0	779.7
27.5°	1017.1	944.3	871.4	836.7	801.9	786.5	771.0	763.8	756.6	749.8	743.1
30°	950.5	885.4	820.3	790.3	760.4	746.4	732.4	725.2	718.0	711.7	705.4
32.5°	888.8	832.8	776.8	749.3	721.8	710.2	698.7	690.0	681.3	676.5	671.6
35°	829.9	779.7	729.5	706.9	684.2	672.6	661.0	653.8	646.6	642.7	638.8
37.5°	779.7	734.8	690.0	668.3	646.6	635.5	624.4	618.1	611.8	610.4	608.9
40°	728.6	690.0	651.4	630.1	608.9	599.3	589.6	585.8	581.9	580.9	580.0
42.5°	686.1	648.5	610.8	591.5	572.2	564.0	555.8	553.9	552.0	553.4	554.9
45°	636.9	605.5	574.2	556.3	538.5	531.7	525.0	523.5	522.1	525.0	527.9
47.5°	595.4	566.5	537.5	520.6	503.7	498.9	494.1	493.6	493.1	497.0	500.8
50°	552.9	525.0	497.0	483.5	470.0	465.6	461.3	462.7	464.2	470.4	476.7
52.5°	513.4	487.3	461.3	448.7	436.2	433.3	430.4	433.8	437.1	443.9	450.7
55°	470.0	446.3	422.7	413.0	403.4	400.5	397.6	404.3	411.1	417.4	423.6
57.5°	428.5	407.7	387.0	378.3	369.6	369.1	368.6	374.9	381.2	387.9	394.7
60°	384.1	366.7	349.3	342.6	335.8	336.8	337.8	345.0	352.2	357.5	362.8
62.5°	343.5	329.1	314.6	308.3	302.0	304.5	306.9	314.1	321.3	327.6	333.9
65°	303.0	290.9	278.9	274.5	270.2	273.6	277.0	283.2	289.5	293.8	298.2
67.5°	264.4	254.3	244.1	240.8	237.4	240.8	244.1	250.4	256.7	261.0	265.4
70°	223.9	215.7	207.5	205.1	202.7	206.5	210.4	215.7	221.0	225.3	229.7
72.5°	186.2	180.0	173.7	173.2	172.7	176.1	179.5	184.8	190.1	193.0	195.9
75°	149.6	146.2	142.8	142.3	141.9	145.2	148.6	151.5	154.4	156.8	159.2
77.5°	116.8	113.9	111.0	111.5	111.9	114.4	116.8	119.7	122.6	124.0	125.5
80°	83.0	82.0	81.1	82.0	83.0	84.9	86.9	88.8	90.7	91.7	92.6
82.5°	56.9	56.0	55.0	56.5	57.9	59.3	60.8	62.2	63.7	64.2	64.7
85°	32.8	34.3	35.7	35.7	35.7	36.2	36.7	37.2	37.6	37.2	36.7
87.5°	15.4	15.9	16.4	16.4	16.4	16.9	17.4	17.4	17.4	16.9	16.4
90°	9.3	11.7	14.4	17.1	19.9	22.6	23.4	24.3	25.1	25.9	26.6
92.5°	33.2	34.5	35.8	37.0	38.3	39.5	40.1	40.8	41.4	42.0	42.1
95°	61.4	62.9	64.6	66.3	68.0	69.6	70.5	71.3	72.1	73.0	73.4
97.5°	95.4	96.6	97.8	99.1	100.4	101.6	102.7	103.7	104.7	105.8	106.2
100°	133.0	134.1	135.2	136.2	137.3	138.3	138.9	139.6	140.2	140.8	141.3
102.5°	172.8	173.8	175.3	176.8	178.2	179.7	180.3	181.0	181.6	182.2	182.4
105°	213.4	214.5	216.4	218.3	220.2	222.0	222.0	222.0	222.0	222.0	222.3
107.5°	261.5	262.0	262.8	263.6	264.5	265.3	265.9	266.6	267.2	267.8	268.0
110°	307.5	307.9	308.3	308.7	309.1	309.5	310.4	311.2	312.0	312.9	313.1



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CATALOG NUMBER: S123DIP-S775D1025U830-4F0-1E-UDD-G1

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	353.7	353.8	353.8	353.8	353.8	353.8	354.8	355.9	356.9	357.9	358.5
115°	402.4	402.5	402.1	401.6	401.2	400.8	401.0	401.2	401.4	401.6	401.6
117.5°	448.7	448.6	448.2	447.7	447.3	446.9	446.9	446.9	446.9	446.9	446.6
120°	497.1	497.2	496.1	495.1	494.1	493.0	492.8	492.6	492.4	492.2	491.9
122.5°	541.5	541.7	541.3	540.9	540.5	540.0	539.4	538.8	538.2	537.5	536.9
125°	587.7	587.8	587.4	587.0	586.6	586.2	585.3	584.5	583.6	582.8	582.0
127.5°	633.5	633.9	633.5	633.1	632.7	632.3	631.0	629.7	628.5	627.2	626.2
130°	678.5	679.0	678.4	677.7	677.1	676.5	675.6	674.8	674.0	673.1	672.0
132.5°	721.7	722.4	721.9	721.5	721.1	720.7	719.6	718.6	717.6	716.5	715.5
135°	764.3	764.8	764.6	764.4	764.2	764.0	763.1	762.3	761.5	760.6	760.0
137.5°	803.9	804.7	805.4	806.0	806.6	807.3	806.2	805.2	804.1	803.1	802.2
140°	846.2	846.9	847.1	847.3	847.5	847.7	847.5	847.3	847.1	846.9	846.0
142.5°	884.8	885.6	886.0	886.4	886.8	887.2	887.0	886.8	886.6	886.4	885.8
145°	922.8	923.3	923.9	924.5	925.2	925.8	925.6	925.4	925.2	925.0	924.4
147.5°	959.3	960.0	960.6	961.2	961.9	962.5	962.5	962.5	962.5	962.5	961.9
150°	994.3	994.7	995.1	995.5	995.9	996.4	996.4	996.4	996.4	996.4	995.7
152.5°	1025.2	1025.6	1025.8	1026.1	1026.3	1026.5	1026.9	1027.3	1027.7	1028.1	1027.8
155°	1054.7	1054.8	1055.0	1055.2	1055.4	1055.6	1056.5	1057.3	1058.1	1059.0	1058.7
157.5°	1081.1	1081.1	1081.4	1081.6	1081.8	1082.0	1082.8	1083.7	1084.5	1085.3	1085.1
160°	1105.7	1105.5	1105.5	1105.5	1105.5	1105.5	1106.5	1107.6	1108.6	1109.7	1109.8
162.5°	1127.5	1127.2	1127.5	1127.7	1127.9	1128.1	1129.1	1130.2	1131.2	1132.3	1132.1
165°	1146.3	1146.0	1146.0	1146.0	1146.0	1146.0	1147.2	1148.5	1149.7	1151.0	1150.9
167.5°	1161.4	1161.1	1161.3	1161.5	1161.7	1162.0	1163.2	1164.5	1165.7	1167.0	1167.0
170°	1174.6	1174.2	1174.2	1174.2	1174.2	1174.2	1175.6	1177.1	1178.6	1180.0	1180.0
172.5°	1185.0	1184.5	1184.5	1184.5	1184.5	1184.5	1185.8	1187.0	1188.3	1189.6	1189.4
175°	1191.5	1191.1	1191.1	1191.1	1191.1	1191.1	1192.4	1193.6	1194.9	1196.1	1196.0
177.5°	1195.3	1194.9	1194.9	1194.9	1194.9	1194.9	1196.1	1197.4	1198.6	1199.9	1199.8
180°	1197.7	1197.7	1197.7	1197.7	1197.7	1197.7	1197.7	1197.7	1197.7	1197.7	1197.7



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CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	2079.6	2079.6	2079.6	2079.6
2.5°	1848.5	1845.1	1831.6	1818.1
5°	1567.2	1555.6	1551.7	1547.9
7.5°	1369.3	1368.4	1348.1	1327.8
10°	1195.2	1196.6	1178.3	1159.9
12.5°	1070.7	1058.6	1057.2	1055.7
15°	977.1	966.0	964.0	962.1
17.5°	911.0	904.2	902.3	900.3
20°	860.8	856.9	853.5	850.2
22.5°	817.4	812.5	809.6	806.7
25°	775.4	771.0	770.1	769.1
27.5°	737.7	732.4	732.4	732.4
30°	702.0	698.7	697.2	695.8
32.5°	668.7	665.9	665.9	665.9
35°	637.4	635.9	634.0	632.1
37.5°	608.9	608.9	608.0	607.0
40°	581.4	582.9	582.9	582.9
42.5°	556.3	557.8	557.8	557.8
45°	530.3	532.7	533.6	534.6
47.5°	504.7	508.6	509.5	510.5
50°	479.6	482.5	483.0	483.5
52.5°	454.0	457.4	459.8	462.2
55°	427.0	430.4	431.8	433.3
57.5°	398.1	401.4	401.9	402.4
60°	366.2	369.6	370.6	371.5
62.5°	335.8	337.8	338.7	339.7
65°	301.1	304.0	305.9	307.8
67.5°	267.8	270.2	270.2	270.2
70°	230.6	231.6	233.0	234.5
72.5°	196.4	196.9	196.9	196.9
75°	160.2	161.2	161.6	162.1
77.5°	125.9	126.4	126.4	126.4
80°	92.2	91.7	91.7	91.7
82.5°	63.2	61.8	61.8	61.8
85°	36.2	35.7	36.2	36.7
87.5°	16.4	16.4	16.4	16.4
90°	27.0	27.4	27.8	28.2
92.5°	41.7	41.3	40.9	40.5
95°	73.4	73.4	73.4	73.4
97.5°	106.0	105.8	105.6	105.4
100°	141.8	142.2	142.6	143.0
102.5°	182.2	182.0	181.8	181.6
105°	222.7	223.1	223.5	223.9
107.5°	267.8	267.6	267.4	267.2
110°	312.7	312.3	311.8	311.4



TEST NUMBER: P831586

CATALOG NUMBER: S123DIP-S775D1025U830-4F0-1E-UDD-G1

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
112.5°	358.5	358.5	358.5	358.5
115°	401.4	401.2	401.0	400.8
117.5°	446.0	445.3	444.7	444.1
120°	491.4	491.0	490.6	490.2
122.5°	536.3	535.7	535.0	534.4
125°	581.1	580.3	579.5	578.6
127.5°	625.4	624.5	623.7	622.8
130°	670.5	669.1	667.6	666.1
132.5°	714.4	713.4	712.3	711.3
135°	759.6	759.2	758.7	758.3
137.5°	801.6	801.0	800.4	799.7
140°	844.6	843.1	841.6	840.2
142.5°	884.7	883.7	882.6	881.6
145°	923.6	922.8	921.9	921.1
147.5°	960.6	959.4	958.1	956.8
150°	994.5	993.2	992.0	990.7
152.5°	1026.8	1025.7	1024.7	1023.6
155°	1057.2	1055.7	1054.3	1052.8
157.5°	1083.9	1082.6	1081.4	1080.1
160°	1109.0	1108.1	1107.3	1106.4
162.5°	1130.6	1129.1	1127.7	1126.2
165°	1149.4	1147.9	1146.5	1145.0
167.5°	1165.7	1164.5	1163.2	1162.0
170°	1178.6	1177.1	1175.6	1174.2
172.5°	1188.0	1186.5	1185.1	1183.6
175°	1194.6	1193.1	1191.6	1190.2
177.5°	1198.3	1196.9	1195.4	1193.9
180°	1197.7	1197.7	1197.7	1197.7

TEST NUMBER: P831586

CATALOG NUMBER: S123DIP-S775D1025U830-4F0-1E-UDD-G1

CIE UGR TABLE:

Reflectances:											
Ceiling		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference plane		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		Viewed crosswise					Viewed endwise				
X=2H	Y=2H	14.38	15.21	15.35	16.18	17.46	16.62	17.45	17.59	18.42	19.69
	3H	16.03	16.77	17.00	17.75	19.05	18.04	18.78	19.02	19.77	21.06
	4H	16.61	17.31	17.59	18.29	19.59	18.49	19.19	19.48	20.18	21.48
	6H	16.98	17.62	17.97	18.61	19.93	18.77	19.41	19.77	20.40	21.72
	8H	17.07	17.68	18.08	18.69	20.00	18.83	19.44	19.83	20.45	21.76
	12H	17.12	17.70	18.12	18.70	20.03	18.85	19.43	19.86	20.43	21.77
4H	2H	14.96	15.66	15.95	16.64	17.94	16.78	17.48	17.78	18.47	19.77
	3H	16.78	17.37	17.78	18.38	19.70	18.40	18.98	19.40	20.00	21.31
	4H	17.48	18.01	18.49	19.02	20.36	18.98	19.51	19.99	20.52	21.86
	6H	17.95	18.41	18.97	19.44	20.78	19.38	19.84	20.40	20.87	22.21
	8H	18.09	18.52	19.11	19.54	20.89	19.49	19.92	20.52	20.95	22.30
	12H	18.15	18.54	19.19	19.58	20.94	19.54	19.92	20.58	20.96	22.32
8H	4H	17.74	18.17	18.77	19.19	20.55	19.08	19.51	20.11	20.54	21.89
	6H	18.33	18.68	19.38	19.75	21.10	19.59	19.94	20.63	21.00	22.35
	8H	18.54	18.85	19.59	19.90	21.27	19.76	20.07	20.82	21.13	22.49
	12H	18.66	18.93	19.72	19.98	21.39	19.87	20.14	20.92	21.18	22.59
12H	4H	17.74	18.13	18.78	19.17	20.52	19.06	19.44	20.10	20.48	21.84
	6H	18.38	18.69	19.44	19.74	21.11	19.60	19.91	20.65	20.96	22.33
	8H	18.61	18.89	19.67	19.93	21.34	19.80	20.07	20.85	21.12	22.53