

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: P831293

Luminaire Tested: S123DIP-S1165D805U835-4F0-1E-UDD-G4

Issue Date: 05/03/2024

Test Information

Test Method: LM-79-2019
Report Number: P831293
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2301-905-1, G3-1807-864-17)
Test Lab: INNOVATION CENTER
Issue Date: 05/03/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123DIP-S1165D805U835-4F0-1E-UDD-G4
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1165 LUMENS PER FOOT, GRAZE OPTIC
UPLIGHT 805 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: -

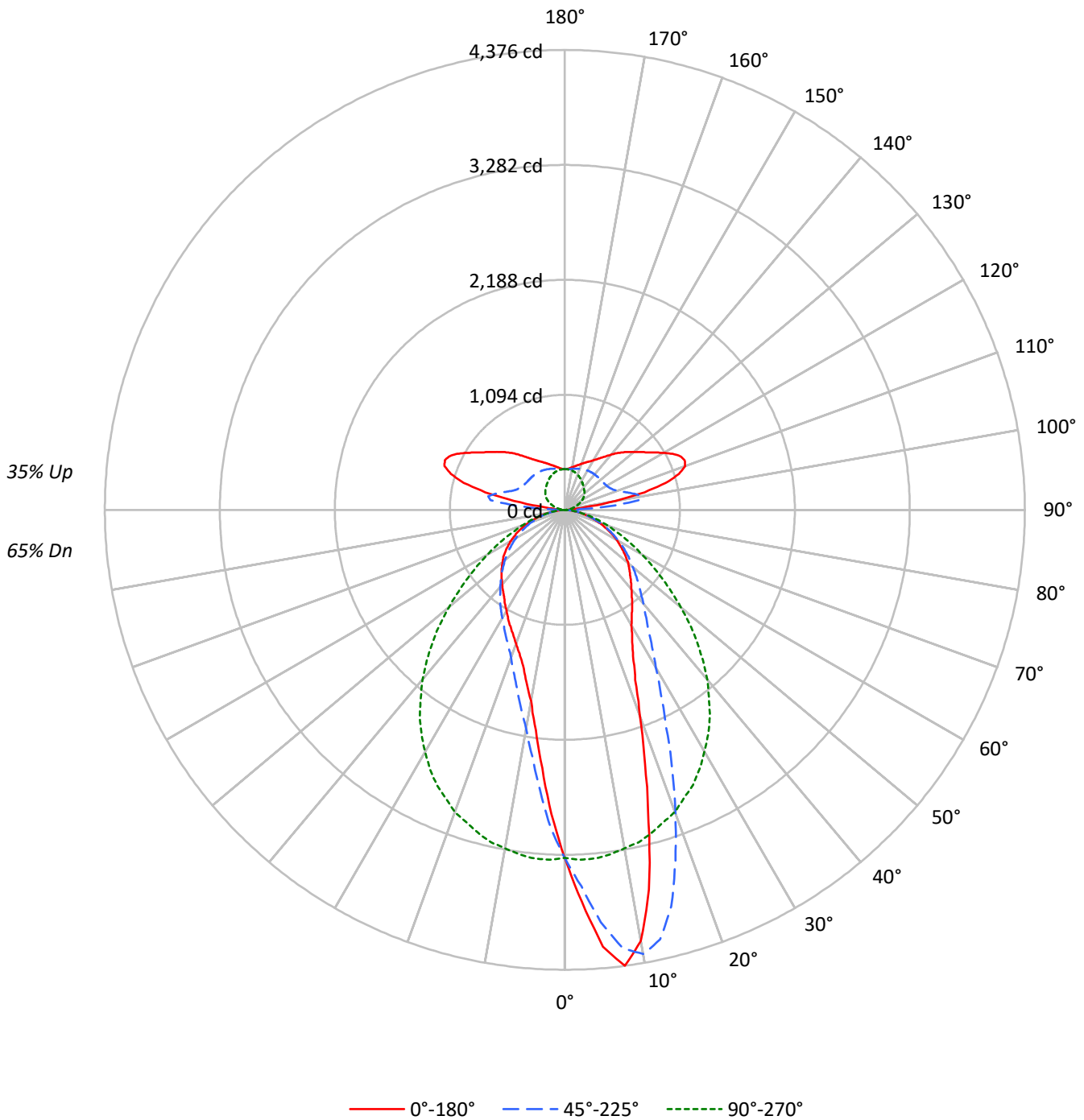
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8231.8 lumens
Efficiency: N/A
Efficacy: 131.1 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: Semi-Direct

Input Watts (W): 62.8
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				
RC	80					70					50					30				
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0		
RCR																				
0	111	111	111	111	104	104	104	104	92	92	92	80	80	80	70	70	70	65		
1	102	98	94	90	96	92	89	86	81	79	77	72	70	68	63	61	60	56		
2	93	86	80	75	87	81	76	72	72	68	65	64	61	58	56	54	52	48		
3	86	76	69	64	80	72	66	61	64	59	55	57	53	50	50	47	45	42		
4	79	68	61	55	74	65	58	52	58	52	48	52	47	44	46	42	40	36		
5	73	61	54	48	68	58	51	46	52	47	42	47	42	39	42	38	35	32		
6	67	56	48	42	63	53	46	41	48	42	37	43	38	34	38	34	32	29		
7	63	51	43	37	59	48	41	36	44	38	34	39	35	31	35	31	28	26		
8	59	46	39	34	55	44	37	33	40	34	30	36	32	28	33	29	26	24		
9	55	43	35	30	52	41	34	30	37	32	28	34	29	26	30	27	24	22		
10	52	40	33	28	49	38	31	27	35	29	25	31	27	24	28	25	22	20		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	35652	35652	35652	35652	35652
5°	45089	42557	35971	28988	26639
10°	45527	46904	35732	23107	20193
15°	34290	43547	35489	19568	17076
20°	23891	35238	35035	17113	15511
25°	18218	27099	34264	15745	14549
30°	15760	21530	33030	14777	13774
35°	14623	18177	31608	14077	13228
40°	13843	16305	29609	13412	13045
45°	13384	15092	27070	12892	12962
50°	13152	14130	24065	12419	12894
55°	12662	13427	21114	11971	12951
60°	12211	12673	18200	11548	12738
65°	11469	11961	15697	11097	12488
70°	10593	11053	13350	10351	11755
75°	9590	9906	11441	9619	10738
80°	7910	8672	9050	8387	9050
85°	6262	7027	6644	7114	7213

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 80°
 Vertical Angle: 45°
 Luminance: 30908 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	313.1	3.8
10°-20°	779.0	9.5
20°-30°	922.4	11.2
30°-40°	927.4	11.3
40°-50°	850.9	10.3
50°-60°	702.3	8.5
60°-70°	496.8	6.0
70°-80°	265.2	3.2
80°-90°	69.4	0.8
90°-100°	209.6	2.5
100°-110°	613.6	7.5
110°-120°	599.2	7.3
120°-130°	477.2	5.8
130°-140°	376.5	4.6
140°-150°	280.9	3.4
150°-160°	195.8	2.4
160°-170°	115.0	1.4
170°-180°	37.4	0.5
0°-30°	2014.6	24.5
0°-40°	2942.0	35.7
0°-60°	4495.2	54.6
0°-90°	5326.6	64.7
90°-120°	1422.4	17.3
90°-150°	2556.9	31.1
90°-180°	2905.0	35.3
0°-180°	8231.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	3312	3312	3312	3312	3312	
5°	4173	3939	3329	2683	2465	398
15°	3077	3908	3185	1756	1532	850
25°	1534	2282	2885	1326	1225	724
35°	1113	1383	2405	1071	1007	699
45°	879	991	1778	847	852	681
55°	675	716	1125	638	690	604
65°	450	470	616	436	490	447
75°	231	238	275	231	258	242
85°	51	57	54	58	58	57
90°	23	20	2	20	23	15
95°	91	464	27	464	91	147
105°	994	629	91	629	994	992
115°	1210	481	160	481	1210	1179
125°	954	449	223	449	954	863
135°	773	442	261	442	773	600
145°	604	437	298	437	604	384
155°	501	423	338	423	501	233
165°	437	405	370	405	437	125
175°	393	389	385	389	393	38
180°	386	386	386	386	386	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	3312.2	3312.2	3312.2	3312.2	3312.2	3312.2	3312.2	3312.2	3312.2	3312.2	3312.2
2.5°	3733.4	3729.5	3725.7	3706.5	3687.3	3678.0	3668.8	3641.2	3613.5	3582.8	3552.0
5°	4173.0	4183.7	4194.5	4182.2	4169.9	4132.2	4094.6	4044.6	3994.7	3938.6	3882.5
7.5°	4375.8	4382.0	4388.1	4380.5	4372.8	4362.8	4352.8	4308.2	4263.6	4206.0	4148.4
10°	4165.3	4179.1	4192.9	4222.9	4252.9	4286.7	4320.5	4314.4	4308.2	4291.3	4274.4
12.5°	3702.6	3719.5	3736.5	3796.4	3856.3	3933.2	4010.0	4076.1	4142.2	4188.3	4234.4
15°	3077.1	3124.0	3170.8	3225.4	3280.0	3392.9	3505.9	3645.0	3784.1	3907.8	4031.6
17.5°	2534.5	2552.2	2569.9	2628.3	2686.7	2828.9	2971.0	3131.6	3292.3	3497.5	3702.6
20°	2085.7	2101.9	2118.0	2194.8	2271.7	2383.1	2494.6	2675.2	2855.8	3076.3	3296.9
22.5°	1752.2	1777.5	1802.9	1845.9	1889.0	1995.8	2102.6	2263.2	2423.9	2667.5	2911.1
25°	1533.9	1552.4	1570.8	1596.9	1623.1	1708.4	1793.7	1925.9	2058.0	2281.7	2505.3
27.5°	1384.8	1392.5	1400.2	1426.3	1452.5	1507.8	1563.1	1676.9	1790.6	1980.4	2170.2
30°	1268.0	1273.4	1278.8	1301.8	1324.9	1362.6	1400.2	1482.4	1564.7	1732.2	1899.7
32.5°	1186.6	1190.4	1194.3	1211.9	1229.6	1256.5	1283.4	1343.3	1403.3	1541.6	1679.9
35°	1112.8	1115.1	1117.4	1130.5	1143.5	1163.5	1183.5	1228.8	1274.2	1383.3	1492.4
37.5°	1048.2	1051.3	1054.4	1062.1	1069.8	1087.4	1105.1	1141.2	1177.3	1261.1	1344.9
40°	985.2	990.6	996.0	1001.4	1006.7	1021.3	1035.9	1063.6	1091.3	1160.4	1229.6
42.5°	931.4	936.8	942.2	944.5	946.8	955.2	963.7	989.1	1014.4	1065.9	1117.4
45°	879.2	881.5	883.8	886.1	888.4	895.3	902.2	924.5	946.8	991.4	1035.9
47.5°	831.5	831.5	831.5	833.1	834.6	840.7	846.9	863.0	879.2	913.7	948.3
50°	785.4	785.4	785.4	783.1	780.8	784.6	788.5	800.8	813.1	843.8	874.6
52.5°	730.1	730.1	730.1	730.8	731.6	731.6	731.6	742.4	753.1	780.8	808.5
55°	674.7	677.8	680.9	678.6	676.3	677.8	679.4	686.3	693.2	715.5	737.8
57.5°	619.4	620.9	622.5	621.7	620.9	621.7	622.5	628.6	634.8	651.7	668.6
60°	567.2	567.2	567.2	565.6	564.1	565.6	567.2	570.2	573.3	588.7	604.0
62.5°	508.7	509.5	510.3	511.1	511.8	510.3	508.7	512.6	516.4	528.0	539.5
65°	450.3	451.1	451.9	454.2	456.5	455.0	453.4	457.3	461.1	469.6	478.0
67.5°	398.1	396.5	395.0	395.8	396.5	398.9	401.2	401.9	402.7	411.9	421.1
70°	336.6	338.1	339.7	338.9	338.1	338.9	339.7	342.0	344.3	351.2	358.1
72.5°	281.3	282.0	282.8	282.8	282.8	284.3	285.9	288.2	290.5	294.3	298.2
75°	230.6	230.6	230.6	232.1	233.6	234.4	235.2	235.2	235.2	238.2	241.3
77.5°	175.2	179.1	182.9	182.1	181.4	182.9	184.4	186.7	189.1	190.6	192.1
80°	127.6	127.6	127.6	128.3	129.1	131.4	133.7	135.3	136.8	139.9	142.9
82.5°	81.5	82.2	83.0	85.3	87.6	89.1	90.7	93.0	95.3	95.3	95.3
85°	50.7	49.2	47.6	49.2	50.7	52.3	53.8	54.6	55.3	56.9	58.4
87.5°	24.6	24.6	24.6	24.6	24.6	25.4	26.1	26.1	26.1	26.1	26.1
90°	22.7	23.5	22.7	21.9	22.7	21.1	20.3	19.5	18.8	19.5	17.2
92.5°	41.4	43.0	42.2	45.3	46.9	52.4	60.2	77.4	108.7	145.4	161.1
95°	90.7	93.8	99.3	106.3	121.2	149.3	190.8	281.5	376.1	463.6	412.8
97.5°	186.1	194.7	213.4	243.1	295.5	384.7	487.9	646.6	737.3	713.0	532.4
100°	490.2	489.4	519.9	577.0	655.9	767.0	858.4	921.8	894.4	740.4	500.4
102.5°	776.3	799.0	823.3	865.5	922.5	982.7	1026.5	1013.2	902.2	689.6	453.5
105°	994.5	998.4	1023.4	1053.1	1089.1	1109.4	1094.5	1016.4	853.0	628.6	416.7
107.5°	1136.8	1145.4	1155.5	1169.6	1174.3	1153.2	1092.2	969.5	782.6	574.6	390.1
110°	1218.1	1219.6	1221.2	1214.9	1193.1	1138.3	1039.8	896.0	716.9	530.1	376.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	1234.5	1233.7	1225.9	1203.2	1158.7	1084.4	971.0	823.3	659.9	500.4	368.2
115°	1209.5	1205.6	1189.9	1155.5	1096.9	1011.7	896.7	760.7	616.1	480.8	367.5
117.5°	1154.7	1149.3	1125.8	1087.5	1026.5	938.2	832.6	712.2	587.1	467.5	368.2
120°	1082.8	1078.1	1059.4	1015.6	953.8	874.9	781.0	675.5	565.3	458.9	371.4
122.5°	1015.6	1009.3	988.2	949.9	896.7	824.8	739.6	646.6	547.3	453.5	376.8
125°	953.8	948.3	928.8	894.4	844.4	781.8	706.8	621.5	532.4	448.8	382.3
127.5°	900.7	896.0	878.0	848.3	802.9	745.1	676.3	598.9	518.3	446.4	388.6
130°	856.9	850.6	834.2	806.1	764.6	711.5	648.1	577.8	507.4	444.1	394.8
132.5°	813.9	810.0	795.9	767.7	729.4	679.4	621.5	558.2	497.2	443.3	399.5
135°	773.2	767.7	753.7	730.2	691.9	647.3	596.5	541.0	488.6	442.5	404.2
137.5°	730.2	725.5	713.8	689.6	656.7	616.9	571.5	524.6	480.8	440.9	407.3
140°	684.9	685.7	673.1	651.3	621.5	587.9	550.4	510.5	473.8	440.2	410.5
142.5°	642.7	643.4	632.5	613.7	589.5	561.3	530.1	497.2	467.5	438.6	412.8
145°	604.3	602.8	596.5	580.1	560.6	537.9	512.9	487.1	462.1	437.0	413.6
147.5°	571.5	570.7	564.5	552.7	537.1	520.7	499.6	478.5	456.6	434.7	413.6
150°	543.4	543.4	538.7	530.1	518.3	503.5	487.1	469.1	451.1	431.6	413.6
152.5°	519.9	519.9	517.6	509.7	501.1	489.4	475.3	460.5	444.9	427.7	411.2
155°	501.1	500.4	498.8	492.5	485.5	476.1	464.4	451.9	438.6	423.0	409.7
157.5°	483.2	483.2	481.6	476.9	470.7	462.8	453.5	442.5	431.6	419.1	407.3
160°	466.0	466.7	466.7	462.1	456.6	451.1	443.3	434.7	424.5	414.4	405.8
162.5°	450.3	451.1	451.1	447.2	444.1	439.4	432.3	425.3	417.5	409.7	402.6
165°	437.0	437.0	437.8	434.7	431.6	427.7	422.2	417.5	411.2	405.0	399.5
167.5°	423.7	423.7	424.5	422.2	420.6	417.5	414.4	410.5	405.0	400.3	396.4
170°	412.0	412.0	412.8	411.2	410.5	408.9	405.8	403.4	399.5	395.6	393.3
172.5°	401.1	401.9	403.4	401.9	401.9	401.1	398.7	397.2	394.0	391.7	390.9
175°	393.3	394.0	394.8	394.0	394.0	394.0	392.5	391.7	390.1	388.6	388.6
177.5°	387.8	387.8	389.3	388.6	389.3	389.3	388.6	387.8	387.0	386.2	387.0
180°	386.2	386.2	386.2	386.2	386.2	386.2	386.2	386.2	386.2	386.2	386.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	3312.2	3312.2	3312.2	3312.2	3312.2	3312.2	3312.2	3312.2	3312.2	3312.2	3312.2
2.5°	3542.8	3533.6	3499.8	3465.9	3427.5	3389.1	3360.7	3332.2	3290.0	3247.7	3213.1
5°	3839.4	3796.4	3724.9	3653.5	3556.6	3459.8	3394.5	3329.1	3241.5	3153.9	3084.0
7.5°	4074.6	4000.8	3900.9	3801.0	3674.2	3547.4	3427.5	3307.6	3173.9	3040.2	2931.1
10°	4224.5	4174.5	4059.2	3944.0	3774.1	3604.3	3436.7	3269.2	3097.1	2924.9	2780.4
12.5°	4239.1	4243.7	4137.6	4031.6	3839.4	3647.3	3443.7	3240.0	3023.3	2806.6	2638.3
15°	4110.7	4189.9	4131.5	4073.1	3879.4	3685.7	3435.2	3184.7	2934.9	2685.1	2490.7
17.5°	3872.5	4042.3	4050.8	4059.2	3865.6	3671.9	3394.5	3117.0	2834.2	2551.4	2347.0
20°	3547.4	3797.9	3884.0	3970.1	3812.5	3655.0	3356.8	3058.6	2742.0	2425.4	2211.0
22.5°	3215.4	3519.7	3677.3	3834.8	3718.0	3601.2	3283.8	2966.4	2632.1	2297.8	2080.3
25°	2837.3	3169.3	3411.4	3653.5	3582.0	3510.5	3197.7	2885.0	2529.1	2173.3	1951.2
27.5°	2507.6	2845.0	3137.0	3429.1	3413.7	3398.3	3087.8	2777.4	2413.1	2048.8	1834.4
30°	2214.1	2528.4	2855.0	3181.6	3219.3	3256.9	2957.2	2657.5	2292.4	1927.4	1720.7
32.5°	1954.3	2228.7	2579.1	2929.5	3003.3	3077.1	2806.6	2536.1	2174.9	1813.7	1614.6
35°	1741.4	1990.4	2340.9	2691.3	2783.5	2875.7	2640.6	2405.4	2053.4	1701.5	1511.6
37.5°	1553.1	1761.4	2103.4	2445.4	2558.3	2671.3	2460.7	2250.2	1920.5	1590.8	1416.3
40°	1397.1	1564.7	1879.0	2193.3	2323.9	2454.6	2280.9	2107.2	1794.5	1481.7	1321.1
42.5°	1266.5	1415.6	1700.7	1985.8	2111.1	2236.3	2089.6	1942.8	1664.6	1386.4	1239.6
45°	1155.1	1274.2	1533.2	1792.1	1911.3	2030.4	1904.3	1778.3	1533.2	1288.0	1151.2
47.5°	1050.5	1152.8	1374.1	1595.4	1701.5	1807.5	1709.1	1610.8	1403.3	1195.8	1072.1
50°	956.8	1039.0	1232.7	1426.3	1518.6	1610.8	1523.9	1437.1	1266.5	1095.9	988.3
52.5°	875.3	942.2	1104.3	1266.5	1345.6	1424.8	1350.3	1275.7	1140.5	1005.2	911.4
55°	794.6	851.5	992.1	1132.8	1186.6	1240.4	1182.7	1125.1	1016.0	906.8	827.7
57.5°	719.3	770.0	885.3	1000.6	1042.1	1083.6	1031.3	979.1	896.8	814.6	748.5
60°	645.5	687.0	783.1	879.2	904.5	929.9	887.6	845.4	787.7	730.1	670.9
62.5°	577.1	614.8	686.3	757.7	774.6	791.6	759.3	727.0	683.2	639.4	593.3
65°	506.4	534.9	593.3	651.7	662.4	673.2	644.8	616.3	583.3	550.2	516.4
67.5°	441.1	461.1	508.7	556.4	557.2	557.9	534.9	511.8	493.4	474.9	448.0
70°	377.3	396.5	428.1	459.6	460.3	461.1	442.7	424.2	410.4	396.5	376.6
72.5°	312.0	325.8	349.7	373.5	372.0	370.4	358.9	347.4	336.6	325.8	311.2
75°	252.8	264.4	280.5	296.6	292.0	287.4	281.3	275.1	265.9	256.7	247.5
77.5°	199.0	206.0	215.2	224.4	221.3	218.3	212.9	207.5	200.6	193.7	189.8
80°	146.0	149.1	155.2	161.4	159.8	158.3	152.2	146.0	144.5	142.9	137.6
82.5°	99.1	103.0	104.5	106.1	105.3	104.5	99.9	95.3	93.8	92.2	91.5
85°	59.2	59.9	60.7	61.5	59.2	56.9	55.3	53.8	53.8	53.8	53.0
87.5°	26.9	27.7	27.7	27.7	26.9	26.1	24.6	23.1	23.8	24.6	24.6
90°	14.9	12.5	10.2	8.6	7.0	4.7	3.1	1.6	3.1	4.7	7.0
92.5°	120.4	79.0	53.9	39.9	32.1	25.0	17.2	11.7	17.2	25.0	32.1
95°	284.6	168.1	101.6	71.1	50.8	37.5	28.9	26.6	28.9	37.5	50.8
97.5°	316.6	181.4	115.7	82.1	61.8	50.0	43.0	42.2	43.0	50.0	61.8
100°	294.7	179.0	124.3	93.8	75.1	64.1	58.6	57.9	58.6	64.1	75.1
102.5°	276.0	182.2	134.5	107.1	90.7	80.5	75.8	74.3	75.8	80.5	90.7
105°	268.9	188.4	146.2	122.0	107.1	97.7	93.0	90.7	93.0	97.7	107.1
107.5°	267.4	198.6	161.1	138.4	124.3	114.9	110.2	107.9	110.2	114.9	124.3
110°	271.3	211.9	176.7	154.8	141.5	132.9	129.0	126.7	129.0	132.9	141.5



TEST NUMBER: P831293

CATALOG NUMBER: S123DIP-S1165D805U835-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	279.1	225.2	193.1	172.0	158.7	150.1	146.2	143.9	146.2	150.1	158.7
115°	287.7	240.0	210.3	189.2	175.9	168.1	163.4	160.3	163.4	168.1	175.9
117.5°	298.7	255.7	225.9	206.4	191.5	184.5	180.6	176.7	180.6	184.5	191.5
120°	311.2	270.5	242.4	222.8	208.0	200.1	196.2	193.9	196.2	200.1	208.0
122.5°	322.9	286.1	258.8	237.7	223.6	215.0	211.1	208.7	211.1	215.0	223.6
125°	335.4	301.0	273.6	252.5	237.7	229.1	224.4	222.8	224.4	229.1	237.7
127.5°	345.6	314.3	287.7	266.6	250.2	241.6	236.1	233.8	236.1	241.6	250.2
130°	355.7	326.0	300.2	279.1	262.7	253.3	246.3	243.9	246.3	253.3	262.7
132.5°	365.1	336.2	311.2	290.8	274.4	262.7	254.9	251.7	254.9	262.7	274.4
135°	372.9	346.3	322.1	301.0	284.6	272.9	264.3	261.1	264.3	272.9	284.6
137.5°	379.2	353.4	329.9	310.4	294.0	281.5	272.9	269.7	272.9	281.5	294.0
140°	383.9	360.4	337.7	318.2	302.6	290.1	282.2	278.3	282.2	290.1	302.6
142.5°	388.6	365.9	344.0	326.0	310.4	299.4	290.8	287.7	290.8	299.4	310.4
145°	391.7	370.6	350.3	332.3	319.0	307.3	300.2	297.9	300.2	307.3	319.0
147.5°	394.0	374.5	355.7	340.1	326.8	316.6	309.6	308.0	309.6	316.6	326.8
150°	394.8	378.4	360.4	346.3	335.4	325.2	319.0	318.2	319.0	325.2	335.4
152.5°	396.4	380.7	365.9	352.6	343.2	334.6	328.4	328.4	328.4	334.6	343.2
155°	396.4	383.9	370.6	359.6	351.0	343.2	338.5	338.5	338.5	343.2	351.0
157.5°	397.2	385.4	374.5	365.9	358.1	351.0	347.1	346.3	347.1	351.0	358.1
160°	397.2	387.8	378.4	370.6	365.1	358.9	355.7	355.7	355.7	358.9	365.1
162.5°	396.4	388.6	380.7	374.5	369.8	365.1	362.8	362.8	362.8	365.1	369.8
165°	394.8	389.3	383.1	377.6	374.5	370.6	369.0	369.8	369.0	370.6	374.5
167.5°	394.0	389.3	384.7	380.7	378.4	375.3	374.5	375.3	374.5	375.3	378.4
170°	391.7	388.6	384.7	383.1	381.5	379.2	378.4	380.0	378.4	379.2	381.5
172.5°	390.9	388.6	385.4	384.7	383.9	382.3	382.3	383.1	382.3	382.3	383.9
175°	389.3	387.8	386.2	385.4	385.4	383.9	384.7	385.4	384.7	383.9	385.4
177.5°	388.6	387.0	386.2	386.2	386.2	385.4	386.2	387.0	386.2	385.4	386.2
180°	386.2	386.2	386.2	386.2	386.2	386.2	386.2	386.2	386.2	386.2	386.2

TEST NUMBER: P831293

CATALOG NUMBER: S123DIP-S1165D805U835-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	3312.2	3312.2	3312.2	3312.2	3312.2	3312.2	3312.2	3312.2	3312.2	3312.2	3312.2
2.5°	3178.5	3148.6	3118.6	3095.5	3072.5	3033.3	2994.1	2984.9	2975.6	2962.6	2949.5
5°	3014.1	2940.3	2866.5	2800.4	2734.3	2682.8	2631.4	2597.5	2563.7	2539.1	2514.5
7.5°	2821.9	2711.3	2600.6	2522.2	2443.8	2369.3	2294.7	2270.9	2247.1	2214.8	2182.5
10°	2636.0	2513.8	2391.6	2289.4	2187.2	2114.1	2041.1	2011.9	1982.7	1942.0	1901.3
12.5°	2470.0	2336.2	2202.5	2099.5	1996.6	1925.9	1855.2	1812.9	1770.6	1747.6	1724.5
15°	2296.3	2153.3	2010.4	1915.1	1819.8	1756.0	1692.2	1655.4	1618.5	1596.2	1573.9
17.5°	2142.6	2001.2	1859.8	1768.3	1676.9	1618.5	1560.1	1527.8	1495.5	1478.6	1461.7
20°	1996.6	1858.2	1719.9	1630.8	1541.6	1494.0	1446.3	1425.6	1404.8	1391.0	1377.2
22.5°	1862.8	1726.8	1590.8	1514.7	1438.6	1400.2	1361.8	1347.2	1332.6	1321.1	1309.5
25°	1729.1	1607.7	1486.3	1421.7	1357.2	1325.7	1294.2	1279.6	1265.0	1253.4	1241.9
27.5°	1620.0	1504.0	1387.9	1332.6	1277.2	1252.7	1228.1	1216.5	1205.0	1194.3	1183.5
30°	1513.9	1410.2	1306.5	1258.8	1211.2	1188.9	1166.6	1155.1	1143.5	1133.5	1123.5
32.5°	1415.6	1326.4	1237.3	1193.5	1149.7	1131.2	1112.8	1099.0	1085.1	1077.4	1069.8
35°	1321.8	1241.9	1162.0	1125.9	1089.7	1071.3	1052.8	1041.3	1029.8	1023.6	1017.5
37.5°	1241.9	1170.4	1099.0	1064.4	1029.8	1012.1	994.4	984.5	974.5	972.2	969.8
40°	1160.4	1099.0	1037.5	1003.7	969.8	954.5	939.1	933.0	926.8	925.3	923.7
42.5°	1092.8	1032.9	972.9	942.2	911.4	898.4	885.3	882.2	879.2	881.5	883.8
45°	1014.4	964.5	914.5	886.1	857.6	846.9	836.1	833.8	831.5	836.1	840.7
47.5°	948.3	902.2	856.1	829.2	802.3	794.6	786.9	786.2	785.4	791.6	797.7
50°	880.7	836.1	791.6	770.0	748.5	741.6	734.7	737.0	739.3	749.3	759.3
52.5°	817.7	776.2	734.7	714.7	694.7	690.1	685.5	690.9	696.3	707.0	717.8
55°	748.5	710.9	673.2	657.8	642.5	637.9	633.2	644.0	654.8	664.8	674.7
57.5°	682.4	649.4	616.3	602.5	588.7	587.9	587.1	597.1	607.1	617.9	628.6
60°	611.7	584.1	556.4	545.6	534.9	536.4	538.0	549.5	561.0	569.5	577.9
62.5°	547.2	524.1	501.1	491.1	481.1	484.9	488.8	500.3	511.8	521.8	531.8
65°	482.6	463.4	444.2	437.3	430.4	435.7	441.1	451.1	461.1	468.0	474.9
67.5°	421.1	405.0	388.9	383.5	378.1	383.5	388.9	398.9	408.8	415.8	422.7
70°	356.6	343.5	330.5	326.6	322.8	328.9	335.1	343.5	352.0	358.9	365.8
72.5°	296.6	286.7	276.7	275.9	275.1	280.5	285.9	294.3	302.8	307.4	312.0
75°	238.2	232.9	227.5	226.7	225.9	231.3	236.7	241.3	245.9	249.8	253.6
77.5°	186.0	181.4	176.8	177.5	178.3	182.1	186.0	190.6	195.2	197.5	199.8
80°	132.2	130.6	129.1	130.6	132.2	135.3	138.3	141.4	144.5	146.0	147.6
82.5°	90.7	89.1	87.6	89.9	92.2	94.5	96.8	99.1	101.4	102.2	103.0
85°	52.3	54.6	56.9	56.9	56.9	57.6	58.4	59.2	59.9	59.2	58.4
87.5°	24.6	25.4	26.1	26.1	26.1	26.9	27.7	27.7	27.7	26.9	26.1
90°	8.6	10.2	12.5	14.9	17.2	19.5	18.8	19.5	20.3	21.1	22.7
92.5°	39.9	53.9	79.0	120.4	161.1	145.4	108.7	77.4	60.2	52.4	46.9
95°	71.1	101.6	168.1	284.6	412.8	463.6	376.1	281.5	190.8	149.3	121.2
97.5°	82.1	115.7	181.4	316.6	532.4	713.0	737.3	646.6	487.9	384.7	295.5
100°	93.8	124.3	179.0	294.7	500.4	740.4	894.4	921.8	858.4	767.0	655.9
102.5°	107.1	134.5	182.2	276.0	453.5	689.6	902.2	1013.2	1026.5	982.7	922.5
105°	122.0	146.2	188.4	268.9	416.7	628.6	853.0	1016.4	1094.5	1109.4	1089.1
107.5°	138.4	161.1	198.6	267.4	390.1	574.6	782.6	969.5	1092.2	1153.2	1174.3
110°	154.8	176.7	211.9	271.3	376.1	530.1	716.9	896.0	1039.8	1138.3	1193.1



TEST NUMBER: P831293

CATALOG NUMBER: S123DIP-S1165D805U835-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	172.0	193.1	225.2	279.1	368.2	500.4	659.9	823.3	971.0	1084.4	1158.7
115°	189.2	210.3	240.0	287.7	367.5	480.8	616.1	760.7	896.7	1011.7	1096.9
117.5°	206.4	225.9	255.7	298.7	368.2	467.5	587.1	712.2	832.6	938.2	1026.5
120°	222.8	242.4	270.5	311.2	371.4	458.9	565.3	675.5	781.0	874.9	953.8
122.5°	237.7	258.8	286.1	322.9	376.8	453.5	547.3	646.6	739.6	824.8	896.7
125°	252.5	273.6	301.0	335.4	382.3	448.8	532.4	621.5	706.8	781.8	844.4
127.5°	266.6	287.7	314.3	345.6	388.6	446.4	518.3	598.9	676.3	745.1	802.9
130°	279.1	300.2	326.0	355.7	394.8	444.1	507.4	577.8	648.1	711.5	764.6
132.5°	290.8	311.2	336.2	365.1	399.5	443.3	497.2	558.2	621.5	679.4	729.4
135°	301.0	322.1	346.3	372.9	404.2	442.5	488.6	541.0	596.5	647.3	691.9
137.5°	310.4	329.9	353.4	379.2	407.3	440.9	480.8	524.6	571.5	616.9	656.7
140°	318.2	337.7	360.4	383.9	410.5	440.2	473.8	510.5	550.4	587.9	621.5
142.5°	326.0	344.0	365.9	388.6	412.8	438.6	467.5	497.2	530.1	561.3	589.5
145°	332.3	350.3	370.6	391.7	413.6	437.0	462.1	487.1	512.9	537.9	560.6
147.5°	340.1	355.7	374.5	394.0	413.6	434.7	456.6	478.5	499.6	520.7	537.1
150°	346.3	360.4	378.4	394.8	413.6	431.6	451.1	469.1	487.1	503.5	518.3
152.5°	352.6	365.9	380.7	396.4	411.2	427.7	444.9	460.5	475.3	489.4	501.1
155°	359.6	370.6	383.9	396.4	409.7	423.0	438.6	451.9	464.4	476.1	485.5
157.5°	365.9	374.5	385.4	397.2	407.3	419.1	431.6	442.5	453.5	462.8	470.7
160°	370.6	378.4	387.8	397.2	405.8	414.4	424.5	434.7	443.3	451.1	456.6
162.5°	374.5	380.7	388.6	396.4	402.6	409.7	417.5	425.3	432.3	439.4	444.1
165°	377.6	383.1	389.3	394.8	399.5	405.0	411.2	417.5	422.2	427.7	431.6
167.5°	380.7	384.7	389.3	394.0	396.4	400.3	405.0	410.5	414.4	417.5	420.6
170°	383.1	384.7	388.6	391.7	393.3	395.6	399.5	403.4	405.8	408.9	410.5
172.5°	384.7	385.4	388.6	390.9	390.9	391.7	394.0	397.2	398.7	401.1	401.9
175°	385.4	386.2	387.8	389.3	388.6	388.6	390.1	391.7	392.5	394.0	394.0
177.5°	386.2	386.2	387.0	388.6	387.0	386.2	387.0	387.8	388.6	389.3	389.3
180°	386.2	386.2	386.2	386.2	386.2	386.2	386.2	386.2	386.2	386.2	386.2



TEST NUMBER: P831293

CATALOG NUMBER: S123DIP-S1165D805U835-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	3312.2	3312.2	3312.2	3312.2
2.5°	2944.1	2938.8	2917.2	2895.7
5°	2496.1	2477.6	2471.5	2465.4
7.5°	2181.0	2179.5	2147.2	2114.9
10°	1903.6	1905.9	1876.7	1847.5
12.5°	1705.3	1686.1	1683.8	1681.5
15°	1556.2	1538.5	1535.5	1532.4
17.5°	1450.9	1440.2	1437.1	1434.0
20°	1371.0	1364.9	1359.5	1354.1
22.5°	1301.8	1294.2	1289.5	1284.9
25°	1235.0	1228.1	1226.5	1225.0
27.5°	1175.0	1166.6	1166.6	1166.6
30°	1118.2	1112.8	1110.5	1108.2
32.5°	1065.1	1060.5	1060.5	1060.5
35°	1015.2	1012.9	1009.8	1006.7
37.5°	969.8	969.8	968.3	966.8
40°	926.0	928.4	928.4	928.4
42.5°	886.1	888.4	888.4	888.4
45°	844.6	848.4	850.0	851.5
47.5°	803.9	810.0	811.5	813.1
50°	763.9	768.5	769.3	770.0
52.5°	723.2	728.5	732.4	736.2
55°	680.1	685.5	687.8	690.1
57.5°	634.0	639.4	640.2	640.9
60°	583.3	588.7	590.2	591.7
62.5°	534.9	538.0	539.5	541.0
65°	479.5	484.2	487.2	490.3
67.5°	426.5	430.4	430.4	430.4
70°	367.3	368.9	371.2	373.5
72.5°	312.8	313.5	313.5	313.5
75°	255.1	256.7	257.4	258.2
77.5°	200.6	201.3	201.3	201.3
80°	146.8	146.0	146.0	146.0
82.5°	100.7	98.4	98.4	98.4
85°	57.6	56.9	57.6	58.4
87.5°	26.1	26.1	26.1	26.1
90°	21.9	22.7	23.5	22.7
92.5°	45.3	42.2	43.0	41.4
95°	106.3	99.3	93.8	90.7
97.5°	243.1	213.4	194.7	186.1
100°	577.0	519.9	489.4	490.2
102.5°	865.5	823.3	799.0	776.3
105°	1053.1	1023.4	998.4	994.5
107.5°	1169.6	1155.5	1145.4	1136.8
110°	1214.9	1221.2	1219.6	1218.1



TEST NUMBER: P831293

CATALOG NUMBER: S123DIP-S1165D805U835-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
112.5°	1203.2	1225.9	1233.7	1234.5
115°	1155.5	1189.9	1205.6	1209.5
117.5°	1087.5	1125.8	1149.3	1154.7
120°	1015.6	1059.4	1078.1	1082.8
122.5°	949.9	988.2	1009.3	1015.6
125°	894.4	928.8	948.3	953.8
127.5°	848.3	878.0	896.0	900.7
130°	806.1	834.2	850.6	856.9
132.5°	767.7	795.9	810.0	813.9
135°	730.2	753.7	767.7	773.2
137.5°	689.6	713.8	725.5	730.2
140°	651.3	673.1	685.7	684.9
142.5°	613.7	632.5	643.4	642.7
145°	580.1	596.5	602.8	604.3
147.5°	552.7	564.5	570.7	571.5
150°	530.1	538.7	543.4	543.4
152.5°	509.7	517.6	519.9	519.9
155°	492.5	498.8	500.4	501.1
157.5°	476.9	481.6	483.2	483.2
160°	462.1	466.7	466.7	466.0
162.5°	447.2	451.1	451.1	450.3
165°	434.7	437.8	437.0	437.0
167.5°	422.2	424.5	423.7	423.7
170°	411.2	412.8	412.0	412.0
172.5°	401.9	403.4	401.9	401.1
175°	394.0	394.8	394.0	393.3
177.5°	388.6	389.3	387.8	387.8
180°	386.2	386.2	386.2	386.2



TEST NUMBER: P831293

CATALOG NUMBER: S123DIP-S1165D805U835-4F0-1E-UDD-G4

CIE UGR TABLE:

Reflectances:											
Ceiling		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference plane		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		Viewed crosswise					Viewed endwise				
X=2H	Y=2H	17.26	18.22	18.09	19.06	20.11	19.50	20.46	20.32	21.30	22.35
	3H	18.91	19.77	19.76	20.63	21.70	20.93	21.79	21.77	22.64	23.72
	4H	19.50	20.31	20.35	21.17	22.26	21.38	22.19	22.24	23.06	24.14
	6H	19.87	20.62	20.74	21.49	22.59	21.66	22.41	22.53	23.28	24.38
	8H	19.97	20.68	20.85	21.57	22.67	21.73	22.44	22.61	23.33	24.43
	12H	20.02	20.70	20.90	21.58	22.70	21.75	22.43	22.63	23.31	24.43
4H	2H	17.85	18.66	18.71	19.52	20.61	19.67	20.48	20.53	21.34	22.43
	3H	19.68	20.36	20.56	21.25	22.35	21.30	21.97	22.17	22.87	23.97
	4H	20.39	21.00	21.27	21.89	23.02	21.89	22.50	22.77	23.39	24.52
	6H	20.87	21.40	21.77	22.31	23.44	22.30	22.83	23.20	23.74	24.87
	8H	21.00	21.50	21.91	22.41	23.55	22.41	22.90	23.31	23.81	24.96
	12H	21.08	21.52	22.00	22.45	23.60	22.46	22.90	23.38	23.83	24.98
8H	4H	20.66	21.15	21.56	22.06	23.21	22.00	22.49	22.90	23.40	24.55
	6H	21.25	21.66	22.18	22.61	23.75	22.51	22.91	23.43	23.86	25.01
	8H	21.46	21.82	22.40	22.76	23.92	22.69	23.05	23.62	23.99	25.15
	12H	21.59	21.91	22.53	22.84	24.05	22.79	23.11	23.73	24.04	25.26
12H	4H	20.66	21.11	21.59	22.04	23.19	21.98	22.42	22.90	23.35	24.50
	6H	21.30	21.66	22.24	22.61	23.77	22.52	22.88	23.46	23.82	24.98
	8H	21.54	21.86	22.48	22.79	24.01	22.72	23.04	23.67	23.98	25.19