

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: P831305

Luminaire Tested: S123DIP-S1165D805U930-4F0-1E-UDD-G4

Issue Date: 05/03/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P831305  
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-S1165D805U930-4F0-1E-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: -

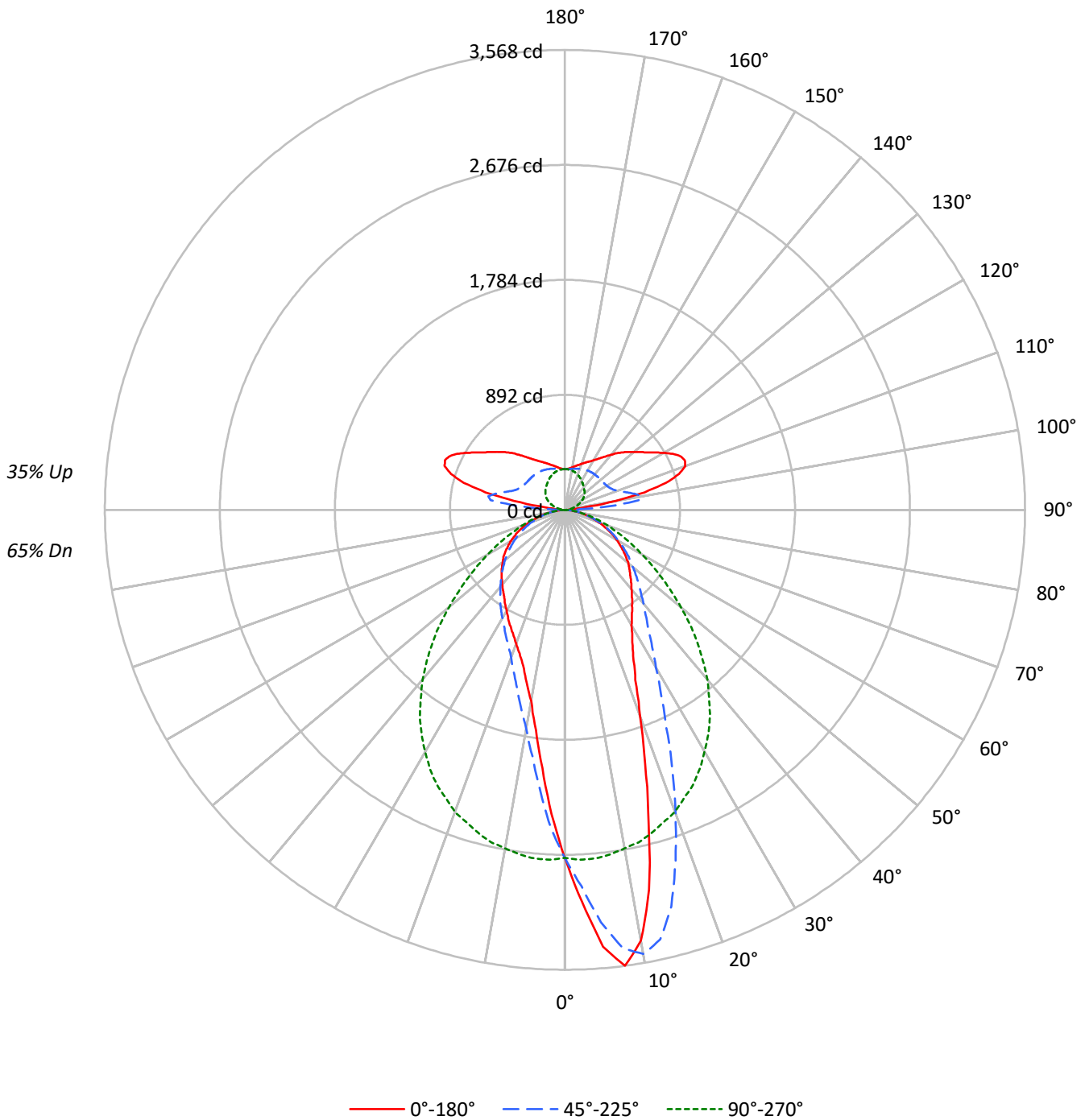
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6711.4 lumens  
Efficiency: N/A  
Efficacy: 106.9 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									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	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°	29068	29068	29068	29068	29068
5°	36761	34696	29327	23634	21718
10°	37117	38241	29133	18840	16463
15°	27956	35504	28934	15954	13923
20°	19479	28730	28565	13952	12646
25°	14853	22094	27935	12836	11861
30°	12849	17554	26929	12048	11230
35°	11922	14820	25769	11477	10786
40°	11286	13294	24140	10935	10635
45°	10911	12304	22071	10511	10567
50°	10722	11521	19621	10124	10513
55°	10323	10946	17214	9758	10558
60°	9954	10331	14837	9414	10385
65°	9352	9750	12798	9049	10180
70°	8636	9010	10886	8441	9583
75°	7819	8077	9328	7844	8754
80°	6447	7067	7376	6837	7376
85°	5113	5730	5422	5805	5879

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 80°  
 Vertical Angle: 45°  
 Luminance: 25199 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	255.3	3.8
10°-20°	635.1	9.5
20°-30°	752.0	11.2
30°-40°	756.1	11.3
40°-50°	693.7	10.3
50°-60°	572.6	8.5
60°-70°	405.0	6.0
70°-80°	216.2	3.2
80°-90°	56.6	0.8
90°-100°	170.9	2.5
100°-110°	500.3	7.5
110°-120°	488.5	7.3
120°-130°	389.1	5.8
130°-140°	307.0	4.6
140°-150°	229.0	3.4
150°-160°	159.7	2.4
160°-170°	93.8	1.4
170°-180°	30.5	0.5
0°-30°	1642.5	24.5
0°-40°	2398.6	35.7
0°-60°	3665.0	54.6
0°-90°	4342.8	64.7
90°-120°	1159.6	17.3
90°-150°	2084.6	31.1
90°-180°	2369.0	35.3
0°-180°	6711.4	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	2700	2700	2700	2700	2700	
5°	3402	3211	2714	2187	2010	324
15°	2509	3186	2596	1432	1249	693
25°	1251	1860	2352	1081	999	590
35°	907	1128	1961	873	821	570
45°	717	808	1450	690	694	555
55°	550	583	917	520	563	492
65°	367	383	502	355	400	365
75°	188	194	224	189	210	198
85°	41	46	44	47	48	46
90°	18	16	1	16	18	12
95°	74	378	22	378	74	120
105°	811	512	74	512	811	809
115°	986	392	131	392	986	962
125°	778	366	182	366	778	704
135°	630	361	213	361	630	489
145°	493	356	243	356	493	313
155°	409	345	276	345	409	190
165°	356	330	302	330	356	102
175°	321	317	314	317	321	31
180°	315	315	315	315	315	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	2700.5	2700.5	2700.5	2700.5	2700.5	2700.5	2700.5	2700.5	2700.5	2700.5	2700.5
2.5°	3043.8	3040.7	3037.6	3021.9	3006.2	2998.7	2991.2	2968.6	2946.1	2921.0	2896.0
5°	3402.2	3411.0	3419.8	3409.7	3399.7	3369.0	3338.3	3297.6	3256.8	3211.1	3165.4
7.5°	3567.6	3572.6	3577.6	3571.4	3565.1	3557.0	3548.8	3512.5	3476.1	3429.2	3382.2
10°	3395.9	3407.2	3418.5	3442.9	3467.4	3494.9	3522.5	3517.5	3512.5	3498.7	3484.9
12.5°	3018.8	3032.5	3046.3	3095.2	3144.1	3206.7	3269.4	3323.3	3377.1	3414.7	3452.3
15°	2508.7	2547.0	2585.2	2629.7	2674.2	2766.3	2858.4	2971.8	3085.2	3186.0	3286.9
17.5°	2066.4	2080.8	2095.2	2142.8	2190.4	2306.4	2422.3	2553.2	2684.2	2851.5	3018.8
20°	1700.5	1713.6	1726.8	1789.5	1852.1	1943.0	2033.8	2181.0	2328.3	2508.1	2687.9
22.5°	1428.6	1449.2	1469.9	1505.0	1540.1	1627.2	1714.3	1845.2	1976.2	2174.8	2373.4
25°	1250.6	1265.6	1280.7	1302.0	1323.3	1392.8	1462.4	1570.2	1677.9	1860.3	2042.6
27.5°	1129.1	1135.3	1141.6	1162.9	1184.2	1229.3	1274.4	1367.1	1459.9	1614.6	1769.4
30°	1033.8	1038.2	1042.6	1061.4	1080.2	1110.9	1141.6	1208.6	1275.7	1412.3	1548.9
32.5°	967.4	970.5	973.7	988.1	1002.5	1024.4	1046.4	1095.2	1144.1	1256.9	1369.7
35°	907.3	909.1	911.0	921.7	932.3	948.6	964.9	1001.9	1038.8	1127.8	1216.8
37.5°	854.6	857.1	859.6	865.9	872.2	886.6	901.0	930.4	959.9	1028.2	1096.5
40°	803.2	807.6	812.0	816.4	820.8	832.7	844.6	867.2	889.7	946.1	1002.5
42.5°	759.4	763.8	768.2	770.0	771.9	778.8	785.7	806.4	827.1	869.0	911.0
45°	716.8	718.7	720.5	722.4	724.3	729.9	735.6	753.7	771.9	808.3	844.6
47.5°	677.9	677.9	677.9	679.2	680.4	685.5	690.5	703.6	716.8	745.0	773.2
50°	640.3	640.3	640.3	638.5	636.6	639.7	642.8	652.9	662.9	688.0	713.0
52.5°	595.2	595.2	595.2	595.9	596.5	596.5	596.5	605.3	614.0	636.6	659.1
55°	550.1	552.6	555.1	553.3	551.4	552.6	553.9	559.5	565.2	583.3	601.5
57.5°	505.0	506.3	507.5	506.9	506.3	506.9	507.5	512.5	517.5	531.3	545.1
60°	462.4	462.4	462.4	461.1	459.9	461.1	462.4	464.9	467.4	479.9	492.5
62.5°	414.8	415.4	416.0	416.7	417.3	416.0	414.8	417.9	421.0	430.4	439.8
65°	367.2	367.8	368.4	370.3	372.2	370.9	369.7	372.8	375.9	382.8	389.7
67.5°	324.6	323.3	322.1	322.7	323.3	325.2	327.1	327.7	328.3	335.8	343.4
70°	274.4	275.7	276.9	276.3	275.7	276.3	276.9	278.8	280.7	286.3	292.0
72.5°	229.3	229.9	230.6	230.6	230.6	231.8	233.1	235.0	236.8	240.0	243.1
75°	188.0	188.0	188.0	189.2	190.5	191.1	191.7	191.7	191.7	194.2	196.7
77.5°	142.9	146.0	149.1	148.5	147.9	149.1	150.4	152.3	154.1	155.4	156.6
80°	104.0	104.0	104.0	104.6	105.3	107.1	109.0	110.3	111.5	114.0	116.5
82.5°	66.4	67.0	67.7	69.5	71.4	72.7	73.9	75.8	77.7	77.7	77.7
85°	41.4	40.1	38.8	40.1	41.4	42.6	43.9	44.5	45.1	46.4	47.6
87.5°	20.0	20.0	20.0	20.0	20.0	20.7	21.3	21.3	21.3	21.3	21.3
90°	18.5	19.1	18.5	17.8	18.5	17.2	16.6	15.9	15.3	15.9	14.0
92.5°	33.8	35.1	34.4	37.0	38.2	42.7	49.1	63.1	88.6	118.6	131.3
95°	73.9	76.5	81.0	86.7	98.8	121.7	155.5	229.5	306.6	378.0	336.6
97.5°	151.7	158.7	174.0	198.2	240.9	313.6	397.7	527.1	601.1	581.3	434.1
100°	399.7	399.0	423.9	470.4	534.8	625.3	699.9	751.5	729.2	603.6	407.9
102.5°	633.0	651.4	671.2	705.6	752.2	801.2	836.9	826.1	735.6	562.2	369.7
105°	810.8	814.0	834.4	858.6	887.9	904.5	892.4	828.6	695.4	512.5	339.7
107.5°	926.8	933.8	942.1	953.6	957.4	940.2	890.5	790.4	638.1	468.5	318.1
110°	993.1	994.4	995.6	990.5	972.7	928.1	847.8	730.5	584.5	432.2	306.6



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	1006.5	1005.8	999.5	981.0	944.7	884.1	791.7	671.2	538.0	407.9	300.2
115°	986.1	982.9	970.1	942.1	894.3	824.8	731.1	620.2	502.3	392.0	299.6
117.5°	941.5	937.0	917.9	886.6	836.9	764.9	678.8	580.7	478.7	381.2	300.2
120°	882.8	879.0	863.7	828.0	777.6	713.3	636.8	550.7	460.9	374.2	302.8
122.5°	828.0	822.9	805.7	774.5	731.1	672.5	603.0	527.1	446.2	369.7	307.2
125°	777.6	773.2	757.3	729.2	688.4	637.4	576.2	506.7	434.1	365.9	311.7
127.5°	734.3	730.5	715.8	691.6	654.6	607.5	551.4	488.3	422.6	364.0	316.8
130°	698.6	693.5	680.1	657.2	623.4	580.0	528.4	471.1	413.7	362.1	321.9
132.5°	663.6	660.4	648.9	625.9	594.7	553.9	506.7	455.1	405.4	361.4	325.7
135°	630.4	625.9	614.5	595.3	564.1	527.8	486.3	441.1	398.4	360.8	329.5
137.5°	595.3	591.5	582.0	562.2	535.4	502.9	466.0	427.7	392.0	359.5	332.1
140°	558.4	559.0	548.8	531.0	506.7	479.3	448.7	416.2	386.3	358.9	334.6
142.5°	524.0	524.6	515.7	500.4	480.6	457.7	432.2	405.4	381.2	357.6	336.6
145°	492.7	491.4	486.3	473.0	457.0	438.5	418.1	397.1	376.7	356.3	337.2
147.5°	466.0	465.3	460.2	450.7	437.9	424.5	407.3	390.1	372.3	354.4	337.2
150°	443.0	443.0	439.2	432.2	422.6	410.5	397.1	382.4	367.8	351.9	337.2
152.5°	423.9	423.9	422.0	415.6	408.6	399.0	387.5	375.4	362.7	348.7	335.3
155°	408.6	407.9	406.7	401.6	395.8	388.2	378.6	368.4	357.6	344.8	334.0
157.5°	393.9	393.9	392.6	388.8	383.7	377.4	369.7	360.8	351.9	341.7	332.1
160°	379.9	380.5	380.5	376.7	372.3	367.8	361.4	354.4	346.1	337.8	330.8
162.5°	367.2	367.8	367.8	364.6	362.1	358.2	352.5	346.8	340.4	334.0	328.3
165°	356.3	356.3	357.0	354.4	351.9	348.7	344.2	340.4	335.3	330.2	325.7
167.5°	345.5	345.5	346.1	344.2	342.9	340.4	337.8	334.6	330.2	326.4	323.2
170°	335.9	335.9	336.6	335.3	334.6	333.4	330.8	328.9	325.7	322.5	320.6
172.5°	327.0	327.6	328.9	327.6	327.6	327.0	325.1	323.8	321.3	319.3	318.7
175°	320.6	321.3	321.9	321.3	321.3	321.3	320.0	319.3	318.1	316.8	316.8
177.5°	316.2	316.2	317.4	316.8	317.4	317.4	316.8	316.2	315.5	314.9	315.5
180°	314.9	314.9	314.9	314.9	314.9	314.9	314.9	314.9	314.9	314.9	314.9



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	2700.5	2700.5	2700.5	2700.5	2700.5	2700.5	2700.5	2700.5	2700.5	2700.5	2700.5
2.5°	2888.4	2880.9	2853.3	2825.8	2794.4	2763.1	2739.9	2716.8	2682.3	2647.8	2619.6
5°	3130.3	3095.2	3036.9	2978.7	2899.7	2820.8	2767.5	2714.2	2642.8	2571.4	2514.4
7.5°	3322.0	3261.9	3180.4	3099.0	2995.6	2892.2	2794.4	2696.7	2587.7	2478.7	2389.7
10°	3444.2	3403.5	3309.5	3215.5	3077.0	2938.6	2802.0	2665.4	2525.0	2384.7	2266.9
12.5°	3456.1	3459.9	3373.4	3286.9	3130.3	2973.6	2807.6	2641.6	2464.9	2288.2	2151.0
15°	3351.5	3416.0	3368.4	3320.8	3162.9	3005.0	2800.7	2596.5	2392.8	2189.2	2030.7
17.5°	3157.2	3295.7	3302.6	3309.5	3151.6	2993.7	2767.5	2541.3	2310.7	2080.2	1913.5
20°	2892.2	3096.5	3166.6	3236.8	3108.4	2979.9	2736.8	2493.7	2235.6	1977.4	1802.6
22.5°	2621.5	2869.6	2998.1	3126.5	3031.3	2936.1	2677.3	2418.5	2146.0	1873.4	1696.1
25°	2313.3	2583.9	2781.3	2978.7	2920.4	2862.1	2607.1	2352.1	2062.0	1771.9	1590.8
27.5°	2044.5	2319.5	2557.6	2795.7	2783.2	2770.6	2517.5	2264.4	1967.4	1670.4	1495.6
30°	1805.1	2061.4	2327.7	2594.0	2624.7	2655.4	2411.0	2166.6	1869.0	1571.4	1402.9
32.5°	1593.3	1817.0	2102.7	2388.4	2448.6	2508.7	2288.2	2067.6	1773.2	1478.7	1316.4
35°	1419.8	1622.8	1908.5	2194.2	2269.4	2344.6	2152.9	1961.1	1674.2	1387.2	1232.4
37.5°	1266.3	1436.1	1714.9	1993.7	2085.8	2177.9	2006.2	1834.6	1565.8	1297.0	1154.7
40°	1139.1	1275.7	1531.9	1788.2	1894.7	2001.2	1859.6	1718.0	1463.0	1208.0	1077.1
42.5°	1032.6	1154.1	1386.6	1619.0	1721.2	1823.3	1703.6	1583.9	1357.1	1130.3	1010.6
45°	941.7	1038.8	1250.0	1461.1	1558.3	1655.4	1552.6	1449.9	1250.0	1050.1	938.6
47.5°	856.5	939.8	1120.3	1300.7	1387.2	1473.7	1393.5	1313.3	1144.1	974.9	874.0
50°	780.1	847.1	1005.0	1162.9	1238.1	1313.3	1242.5	1171.7	1032.6	893.5	805.8
52.5°	713.6	768.2	900.4	1032.6	1097.1	1161.6	1100.9	1040.1	929.8	819.5	743.1
55°	647.9	694.2	808.9	923.5	967.4	1011.3	964.3	917.3	828.3	739.3	674.8
57.5°	586.5	627.8	721.8	815.8	849.6	883.4	840.8	798.2	731.2	664.2	610.3
60°	526.3	560.1	638.5	716.8	737.5	758.1	723.7	689.2	642.2	595.2	547.0
62.5°	470.5	501.2	559.5	617.8	631.6	645.4	619.0	592.7	557.0	521.3	483.7
65°	412.9	436.1	483.7	531.3	540.1	548.9	525.7	502.5	475.6	448.6	421.0
67.5°	359.6	375.9	414.8	453.6	454.3	454.9	436.1	417.3	402.3	387.2	365.3
70°	307.6	323.3	349.0	374.7	375.3	375.9	360.9	345.9	334.6	323.3	307.0
72.5°	254.4	265.7	285.1	304.5	303.3	302.0	292.6	283.2	274.4	265.7	253.8
75°	206.1	215.5	228.7	241.9	238.1	234.3	229.3	224.3	216.8	209.3	201.8
77.5°	162.3	167.9	175.4	183.0	180.4	177.9	173.6	169.2	163.5	157.9	154.8
80°	119.0	121.6	126.6	131.6	130.3	129.1	124.1	119.0	117.8	116.5	112.2
82.5°	80.8	84.0	85.2	86.5	85.8	85.2	81.5	77.7	76.4	75.2	74.6
85°	48.2	48.9	49.5	50.1	48.2	46.4	45.1	43.9	43.9	43.9	43.2
87.5°	21.9	22.6	22.6	22.6	21.9	21.3	20.0	18.8	19.4	20.0	20.0
90°	12.1	10.2	8.3	7.0	5.7	3.8	2.5	1.3	2.5	3.8	5.7
92.5°	98.2	64.4	44.0	32.5	26.1	20.4	14.0	9.6	14.0	20.4	26.1
95°	232.0	137.0	82.9	58.0	41.4	30.6	23.6	21.7	23.6	30.6	41.4
97.5°	258.2	147.9	94.3	66.9	50.4	40.8	35.1	34.4	35.1	40.8	50.4
100°	240.3	146.0	101.3	76.5	61.2	52.3	47.8	47.2	47.8	52.3	61.2
102.5°	225.0	148.5	109.6	87.3	73.9	65.7	61.8	60.6	61.8	65.7	73.9
105°	219.3	153.6	119.2	99.4	87.3	79.7	75.9	73.9	75.9	79.7	87.3
107.5°	218.0	161.9	131.3	112.8	101.3	93.7	89.9	88.0	89.9	93.7	101.3
110°	221.2	172.7	144.1	126.2	115.4	108.4	105.2	103.3	105.2	108.4	115.4





TEST NUMBER: P831305

CATALOG NUMBER: S123DIP-S1165D805U930-4F0-1E-UDD-G4

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	227.6	183.6	157.4	140.2	129.4	122.4	119.2	117.3	119.2	122.4	129.4
115°	234.6	195.7	171.5	154.3	143.4	137.0	133.2	130.7	133.2	137.0	143.4
117.5°	243.5	208.4	184.2	168.3	156.2	150.4	147.2	144.1	147.2	150.4	156.2
120°	253.7	220.5	197.6	181.7	169.6	163.2	160.0	158.1	160.0	163.2	169.6
122.5°	263.3	233.3	211.0	193.8	182.3	175.3	172.1	170.2	172.1	175.3	182.3
125°	273.5	245.4	223.1	205.9	193.8	186.8	182.9	181.7	182.9	186.8	193.8
127.5°	281.7	256.2	234.6	217.4	204.0	197.0	192.5	190.6	192.5	197.0	204.0
130°	290.0	265.8	244.8	227.6	214.2	206.5	200.8	198.9	200.8	206.5	214.2
132.5°	297.7	274.1	253.7	237.1	223.7	214.2	207.8	205.2	207.8	214.2	223.7
135°	304.0	282.4	262.6	245.4	232.0	222.5	215.4	212.9	215.4	222.5	232.0
137.5°	309.1	288.1	269.0	253.1	239.7	229.5	222.5	219.9	222.5	229.5	239.7
140°	313.0	293.8	275.4	259.4	246.7	236.5	230.1	226.9	230.1	236.5	246.7
142.5°	316.8	298.3	280.5	265.8	253.1	244.1	237.1	234.6	237.1	244.1	253.1
145°	319.3	302.1	285.6	270.9	260.1	250.5	244.8	242.9	244.8	250.5	260.1
147.5°	321.3	305.3	290.0	277.3	266.4	258.2	252.4	251.1	252.4	258.2	266.4
150°	321.9	308.5	293.8	282.4	273.5	265.2	260.1	259.4	260.1	265.2	273.5
152.5°	323.2	310.4	298.3	287.5	279.8	272.8	267.7	267.7	267.7	272.8	279.8
155°	323.2	313.0	302.1	293.2	286.2	279.8	276.0	276.0	276.0	279.8	286.2
157.5°	323.8	314.2	305.3	298.3	291.9	286.2	283.0	282.4	283.0	286.2	291.9
160°	323.8	316.2	308.5	302.1	297.7	292.6	290.0	290.0	290.0	292.6	297.7
162.5°	323.2	316.8	310.4	305.3	301.5	297.7	295.8	295.8	295.8	297.7	301.5
165°	321.9	317.4	312.3	307.9	305.3	302.1	300.9	301.5	300.9	302.1	305.3
167.5°	321.3	317.4	313.6	310.4	308.5	306.0	305.3	306.0	305.3	306.0	308.5
170°	319.3	316.8	313.6	312.3	311.1	309.1	308.5	309.8	308.5	309.1	311.1
172.5°	318.7	316.8	314.2	313.6	313.0	311.7	311.7	312.3	311.7	311.7	313.0
175°	317.4	316.2	314.9	314.2	314.2	313.0	313.6	314.2	313.6	313.0	314.2
177.5°	316.8	315.5	314.9	314.9	314.9	314.2	314.9	315.5	314.9	314.2	314.9
180°	314.9	314.9	314.9	314.9	314.9	314.9	314.9	314.9	314.9	314.9	314.9



TEST NUMBER: P831305

CATALOG NUMBER: S123DIP-S1165D805U930-4F0-1E-UDD-G4

**CANDELA DISTRIBUTION (continued):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	2700.5	2700.5	2700.5	2700.5	2700.5	2700.5	2700.5	2700.5	2700.5	2700.5	2700.5
2.5°	2591.4	2567.0	2542.6	2523.8	2505.0	2473.0	2441.1	2433.6	2426.0	2415.4	2404.7
5°	2457.4	2397.2	2337.1	2283.2	2229.3	2187.3	2145.3	2117.8	2090.2	2070.1	2050.1
7.5°	2300.7	2210.5	2120.3	2056.4	1992.5	1931.7	1870.9	1851.5	1832.1	1805.7	1779.4
10°	2149.1	2049.5	1949.8	1866.5	1783.2	1723.7	1664.1	1640.3	1616.5	1583.3	1550.1
12.5°	2013.8	1904.7	1795.7	1711.8	1627.8	1570.2	1512.5	1478.1	1443.6	1424.8	1406.0
15°	1872.2	1755.6	1639.1	1561.4	1483.7	1431.7	1379.7	1349.6	1319.5	1301.4	1283.2
17.5°	1746.8	1631.6	1516.3	1441.7	1367.1	1319.5	1271.9	1245.6	1219.3	1205.5	1191.7
20°	1627.8	1515.0	1402.2	1329.6	1256.9	1218.0	1179.2	1162.3	1145.3	1134.1	1122.8
22.5°	1518.8	1407.9	1297.0	1234.9	1172.9	1141.6	1110.3	1098.4	1086.5	1077.1	1067.7
25°	1409.8	1310.8	1211.8	1159.1	1106.5	1080.8	1055.1	1043.2	1031.3	1021.9	1012.5
27.5°	1320.8	1226.2	1131.6	1086.5	1041.3	1021.3	1001.2	991.8	982.4	973.7	964.9
30°	1234.3	1149.7	1065.1	1026.3	987.5	969.3	951.1	941.7	932.3	924.2	916.0
32.5°	1154.1	1081.4	1008.8	973.0	937.3	922.3	907.3	896.0	884.7	878.4	872.2
35°	1077.7	1012.5	947.4	917.9	888.5	873.4	858.4	849.0	839.6	834.6	829.6
37.5°	1012.5	954.2	896.0	867.8	839.6	825.2	810.8	802.6	794.5	792.6	790.7
40°	946.1	896.0	845.9	818.3	790.7	778.2	765.7	760.6	755.6	754.4	753.1
42.5°	891.0	842.1	793.2	768.2	743.1	732.4	721.8	719.3	716.8	718.7	720.5
45°	827.1	786.3	745.6	722.4	699.2	690.5	681.7	679.8	677.9	681.7	685.5
47.5°	773.2	735.6	698.0	676.1	654.1	647.9	641.6	641.0	640.3	645.4	650.4
50°	718.0	681.7	645.4	627.8	610.3	604.6	599.0	600.9	602.7	610.9	619.0
52.5°	666.7	632.8	599.0	582.7	566.4	562.6	558.9	563.3	567.7	576.4	585.2
55°	610.3	579.6	548.9	536.3	523.8	520.0	516.3	525.1	533.8	542.0	550.1
57.5°	556.4	529.4	502.5	491.2	479.9	479.3	478.7	486.8	495.0	503.8	512.5
60°	498.7	476.2	453.6	444.9	436.1	437.3	438.6	448.0	457.4	464.3	471.2
62.5°	446.1	427.3	408.5	400.4	392.2	395.4	398.5	407.9	417.3	425.4	433.6
65°	393.5	377.8	362.2	356.5	350.9	355.3	359.6	367.8	375.9	381.6	387.2
67.5°	343.4	330.2	317.0	312.7	308.3	312.7	317.0	325.2	333.3	339.0	344.6
70°	290.7	280.1	269.4	266.3	263.2	268.2	273.2	280.1	287.0	292.6	298.2
72.5°	241.9	233.7	225.6	224.9	224.3	228.7	233.1	240.0	246.9	250.6	254.4
75°	194.2	189.8	185.5	184.8	184.2	188.6	193.0	196.7	200.5	203.6	206.8
77.5°	151.6	147.9	144.1	144.7	145.4	148.5	151.6	155.4	159.1	161.0	162.9
80°	107.8	106.5	105.3	106.5	107.8	110.3	112.8	115.3	117.8	119.0	120.3
82.5°	73.9	72.7	71.4	73.3	75.2	77.1	78.9	80.8	82.7	83.3	84.0
85°	42.6	44.5	46.4	46.4	46.4	47.0	47.6	48.2	48.9	48.2	47.6
87.5°	20.0	20.7	21.3	21.3	21.3	21.9	22.6	22.6	22.6	21.9	21.3
90°	7.0	8.3	10.2	12.1	14.0	15.9	15.3	15.9	16.6	17.2	18.5
92.5°	32.5	44.0	64.4	98.2	131.3	118.6	88.6	63.1	49.1	42.7	38.2
95°	58.0	82.9	137.0	232.0	336.6	378.0	306.6	229.5	155.5	121.7	98.8
97.5°	66.9	94.3	147.9	258.2	434.1	581.3	601.1	527.1	397.7	313.6	240.9
100°	76.5	101.3	146.0	240.3	407.9	603.6	729.2	751.5	699.9	625.3	534.8
102.5°	87.3	109.6	148.5	225.0	369.7	562.2	735.6	826.1	836.9	801.2	752.2
105°	99.4	119.2	153.6	219.3	339.7	512.5	695.4	828.6	892.4	904.5	887.9
107.5°	112.8	131.3	161.9	218.0	318.1	468.5	638.1	790.4	890.5	940.2	957.4
110°	126.2	144.1	172.7	221.2	306.6	432.2	584.5	730.5	847.8	928.1	972.7



TEST NUMBER: P831305

CATALOG NUMBER: S123DIP-S1165D805U930-4F0-1E-UDD-G4

**CANDELA DISTRIBUTION (continued):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	140.2	157.4	183.6	227.6	300.2	407.9	538.0	671.2	791.7	884.1	944.7
115°	154.3	171.5	195.7	234.6	299.6	392.0	502.3	620.2	731.1	824.8	894.3
117.5°	168.3	184.2	208.4	243.5	300.2	381.2	478.7	580.7	678.8	764.9	836.9
120°	181.7	197.6	220.5	253.7	302.8	374.2	460.9	550.7	636.8	713.3	777.6
122.5°	193.8	211.0	233.3	263.3	307.2	369.7	446.2	527.1	603.0	672.5	731.1
125°	205.9	223.1	245.4	273.5	311.7	365.9	434.1	506.7	576.2	637.4	688.4
127.5°	217.4	234.6	256.2	281.7	316.8	364.0	422.6	488.3	551.4	607.5	654.6
130°	227.6	244.8	265.8	290.0	321.9	362.1	413.7	471.1	528.4	580.0	623.4
132.5°	237.1	253.7	274.1	297.7	325.7	361.4	405.4	455.1	506.7	553.9	594.7
135°	245.4	262.6	282.4	304.0	329.5	360.8	398.4	441.1	486.3	527.8	564.1
137.5°	253.1	269.0	288.1	309.1	332.1	359.5	392.0	427.7	466.0	502.9	535.4
140°	259.4	275.4	293.8	313.0	334.6	358.9	386.3	416.2	448.7	479.3	506.7
142.5°	265.8	280.5	298.3	316.8	336.6	357.6	381.2	405.4	432.2	457.7	480.6
145°	270.9	285.6	302.1	319.3	337.2	356.3	376.7	397.1	418.1	438.5	457.0
147.5°	277.3	290.0	305.3	321.3	337.2	354.4	372.3	390.1	407.3	424.5	437.9
150°	282.4	293.8	308.5	321.9	337.2	351.9	367.8	382.4	397.1	410.5	422.6
152.5°	287.5	298.3	310.4	323.2	335.3	348.7	362.7	375.4	387.5	399.0	408.6
155°	293.2	302.1	313.0	323.2	334.0	344.8	357.6	368.4	378.6	388.2	395.8
157.5°	298.3	305.3	314.2	323.8	332.1	341.7	351.9	360.8	369.7	377.4	383.7
160°	302.1	308.5	316.2	323.8	330.8	337.8	346.1	354.4	361.4	367.8	372.3
162.5°	305.3	310.4	316.8	323.2	328.3	334.0	340.4	346.8	352.5	358.2	362.1
165°	307.9	312.3	317.4	321.9	325.7	330.2	335.3	340.4	344.2	348.7	351.9
167.5°	310.4	313.6	317.4	321.3	323.2	326.4	330.2	334.6	337.8	340.4	342.9
170°	312.3	313.6	316.8	319.3	320.6	322.5	325.7	328.9	330.8	333.4	334.6
172.5°	313.6	314.2	316.8	318.7	318.7	319.3	321.3	323.8	325.1	327.0	327.6
175°	314.2	314.9	316.2	317.4	316.8	316.8	318.1	319.3	320.0	321.3	321.3
177.5°	314.9	314.9	315.5	316.8	315.5	314.9	315.5	316.2	316.8	317.4	317.4
180°	314.9	314.9	314.9	314.9	314.9	314.9	314.9	314.9	314.9	314.9	314.9



TEST NUMBER: P831305

CATALOG NUMBER: S123DIP-S1165D805U930-4F0-1E-UDD-G4

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
0°	2700.5	2700.5	2700.5	2700.5
2.5°	2400.3	2396.0	2378.4	2360.9
5°	2035.1	2020.0	2015.0	2010.0
7.5°	1778.2	1776.9	1750.6	1724.3
10°	1552.0	1553.9	1530.1	1506.2
12.5°	1390.3	1374.7	1372.8	1370.9
15°	1268.8	1254.4	1251.9	1249.4
17.5°	1182.9	1174.2	1171.7	1169.2
20°	1117.8	1112.8	1108.4	1104.0
22.5°	1061.4	1055.1	1051.4	1047.6
25°	1006.9	1001.2	1000.0	998.7
27.5°	958.0	951.1	951.1	951.1
30°	911.6	907.3	905.4	903.5
32.5°	868.4	864.7	864.7	864.7
35°	827.7	825.8	823.3	820.8
37.5°	790.7	790.7	789.5	788.2
40°	755.0	756.9	756.9	756.9
42.5°	722.4	724.3	724.3	724.3
45°	688.6	691.7	693.0	694.2
47.5°	655.4	660.4	661.6	662.9
50°	622.8	626.6	627.2	627.8
52.5°	589.6	594.0	597.1	600.2
55°	554.5	558.9	560.8	562.6
57.5°	516.9	521.3	521.9	522.5
60°	475.6	479.9	481.2	482.4
62.5°	436.1	438.6	439.8	441.1
65°	391.0	394.7	397.2	399.7
67.5°	347.7	350.9	350.9	350.9
70°	299.5	300.7	302.6	304.5
72.5°	255.0	255.6	255.6	255.6
75°	208.0	209.3	209.9	210.5
77.5°	163.5	164.2	164.2	164.2
80°	119.7	119.0	119.0	119.0
82.5°	82.1	80.2	80.2	80.2
85°	47.0	46.4	47.0	47.6
87.5°	21.3	21.3	21.3	21.3
90°	17.8	18.5	19.1	18.5
92.5°	37.0	34.4	35.1	33.8
95°	86.7	81.0	76.5	73.9
97.5°	198.2	174.0	158.7	151.7
100°	470.4	423.9	399.0	399.7
102.5°	705.6	671.2	651.4	633.0
105°	858.6	834.4	814.0	810.8
107.5°	953.6	942.1	933.8	926.8
110°	990.5	995.6	994.4	993.1



TEST NUMBER: P831305

CATALOG NUMBER: S123DIP-S1165D805U930-4F0-1E-UDD-G4

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
112.5°	981.0	999.5	1005.8	1006.5
115°	942.1	970.1	982.9	986.1
117.5°	886.6	917.9	937.0	941.5
120°	828.0	863.7	879.0	882.8
122.5°	774.5	805.7	822.9	828.0
125°	729.2	757.3	773.2	777.6
127.5°	691.6	715.8	730.5	734.3
130°	657.2	680.1	693.5	698.6
132.5°	625.9	648.9	660.4	663.6
135°	595.3	614.5	625.9	630.4
137.5°	562.2	582.0	591.5	595.3
140°	531.0	548.8	559.0	558.4
142.5°	500.4	515.7	524.6	524.0
145°	473.0	486.3	491.4	492.7
147.5°	450.7	460.2	465.3	466.0
150°	432.2	439.2	443.0	443.0
152.5°	415.6	422.0	423.9	423.9
155°	401.6	406.7	407.9	408.6
157.5°	388.8	392.6	393.9	393.9
160°	376.7	380.5	380.5	379.9
162.5°	364.6	367.8	367.8	367.2
165°	354.4	357.0	356.3	356.3
167.5°	344.2	346.1	345.5	345.5
170°	335.3	336.6	335.9	335.9
172.5°	327.6	328.9	327.6	327.0
175°	321.3	321.9	321.3	320.6
177.5°	316.8	317.4	316.2	316.2
180°	314.9	314.9	314.9	314.9



TEST NUMBER: P831305

CATALOG NUMBER: S123DIP-S1165D805U930-4F0-1E-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	16.55	17.51	17.38	18.35	19.40	18.79	19.75	19.62	20.59	21.64
	3H	18.20	19.06	19.05	19.92	20.99	20.22	21.08	21.06	21.93	23.01
	4H	18.79	19.60	19.64	20.46	21.55	20.67	21.49	21.53	22.35	23.43
	6H	19.16	19.91	20.03	20.78	21.88	20.95	21.70	21.82	22.57	23.67
	8H	19.26	19.97	20.14	20.86	21.96	21.02	21.73	21.90	22.62	23.72
	12H	19.31	19.99	20.19	20.87	21.99	21.04	21.72	21.92	22.60	23.72
4H	2H	17.14	17.95	18.00	18.81	19.90	18.96	19.77	19.82	20.63	21.72
	3H	18.97	19.65	19.85	20.54	21.64	20.59	21.26	21.46	22.16	23.26
	4H	19.68	20.29	20.56	21.18	22.31	21.18	21.79	22.06	22.68	23.81
	6H	20.16	20.69	21.06	21.60	22.73	21.59	22.12	22.49	23.03	24.16
	8H	20.29	20.79	21.20	21.70	22.84	21.70	22.20	22.60	23.10	24.25
	12H	20.37	20.81	21.29	21.74	22.89	21.75	22.19	22.67	23.12	24.27
8H	4H	19.95	20.44	20.85	21.35	22.50	21.29	21.78	22.19	22.69	23.84
	6H	20.54	20.95	21.47	21.90	23.04	21.80	22.20	22.73	23.16	24.30
	8H	20.75	21.11	21.69	22.05	23.21	21.98	22.34	22.92	23.28	24.44
	12H	20.88	21.20	21.82	22.13	23.34	22.08	22.40	23.02	23.33	24.55
12H	4H	19.95	20.40	20.88	21.33	22.48	21.27	21.71	22.19	22.64	23.79
	6H	20.59	20.95	21.53	21.90	23.06	21.81	22.17	22.75	23.11	24.28
	8H	20.83	21.15	21.77	22.08	23.30	22.02	22.33	22.96	23.27	24.48