

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: P831312

Luminaire Tested: S123DIP-S1165D805U950-4F0-1E-UDD-G

Issue Date: 05/03/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P831312  
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-S1165D805U950-4F0-1E-UDD-G  
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 1165 LUMENS PER FOOT, GRAZE OPTIC  
UPLIGHT 805 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: -

**Summary**

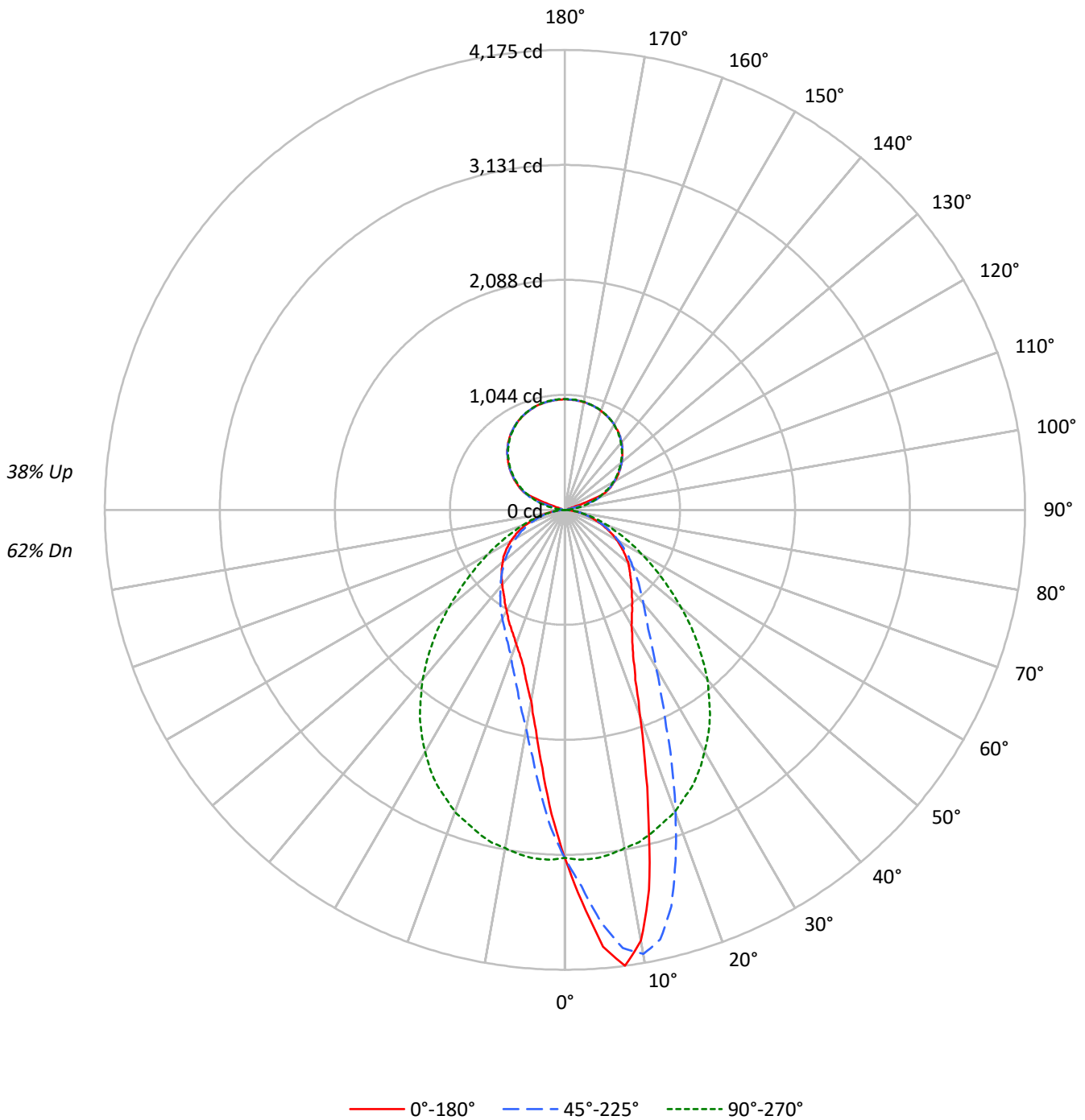
Lumens per Lamp: N/A  
Luminaire Lumens: 8141.9 lumens  
Efficiency: N/A  
Efficacy: 129.6 lumens/watt  
Spacing Criteria (0/90/45): 0.65 / 1.19 / 0.89  
Luminous Opening: Rectangular (W 4' x L: 0.25' x H: 0')  
CIE Type: Semi-Direct

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	
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	110	110	110	110	103	103	103	103	90	90	90	78	78	78	68	68	68	62				
1	101	97	93	90	95	91	88	85	80	78	76	70	68	67	61	59	58	54				
2	93	86	80	75	87	81	75	71	71	67	64	62	59	57	54	52	50	46				
3	85	76	69	63	80	72	65	60	63	59	54	56	52	49	49	46	44	40				
4	78	68	60	54	73	64	57	52	57	52	47	50	46	43	44	41	38	35				
5	72	61	53	47	68	58	51	45	52	46	41	46	41	38	40	37	34	31				
6	67	55	47	42	63	52	45	40	47	41	37	42	37	34	37	33	31	28				
7	62	50	43	37	58	48	41	36	43	37	33	38	34	30	34	30	28	25				
8	58	46	39	33	55	44	37	32	40	34	30	35	31	27	32	28	25	23				
9	54	42	35	30	51	40	34	29	37	31	27	33	28	25	29	26	23	21				
10	51	39	32	27	48	37	31	27	34	29	25	31	26	23	28	24	21	19				

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°	135°	180°
0°	34013	34013	34013	34013	34013
5°	43015	40599	34317	27654	25412
10°	43432	44746	34088	22045	19264
15°	32712	41545	33857	18668	16291
20°	22793	33617	33424	16325	14797
25°	17380	25852	32687	15020	13879
30°	15035	20539	31510	14097	13140
35°	13950	17341	30154	13429	12620
40°	13207	15556	28247	12795	12444
45°	12767	14397	25825	12298	12365
50°	12548	13480	22958	11848	12301
55°	12080	12810	20142	11419	12356
60°	11649	12090	17362	11016	12152
65°	10942	11410	14976	10588	11915
70°	10106	10543	12737	9876	11213
75°	9145	9453	10917	9179	10243
80°	7544	8269	8635	7996	8635
85°	5978	6706	6336	6793	6879

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 80°  
 Vertical Angle: 45°  
 Luminance: 29486 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	298.7	3.7
10°-20°	743.2	9.1
20°-30°	880.0	10.8
30°-40°	884.8	10.9
40°-50°	811.8	10.0
50°-60°	670.0	8.2
60°-70°	474.0	5.8
70°-80°	253.0	3.1
80°-90°	66.2	0.8
90°-100°	35.4	0.4
100°-110°	171.1	2.1
110°-120°	419.4	5.2
120°-130°	532.4	6.5
130°-140°	568.8	7.0
140°-150°	531.9	6.5
150°-160°	429.0	5.3
160°-170°	276.9	3.4
170°-180°	95.4	1.2
0°-30°	1921.9	23.6
0°-40°	2806.7	34.5
0°-60°	4288.4	52.7
0°-90°	5081.6	62.4
90°-120°	625.9	7.7
90°-150°	2259.0	27.7
90°-180°	3060.0	37.6
0°-180°	8141.9	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	3160	3160	3160	3160	3160	
5°	3981	3757	3176	2559	2352	379
15°	2936	3728	3038	1675	1462	811
25°	1463	2177	2752	1265	1169	691
35°	1062	1320	2295	1022	960	667
45°	839	946	1696	808	812	650
55°	644	683	1073	608	658	576
65°	430	448	588	416	468	427
75°	220	227	262	221	246	231
85°	48	54	51	55	56	54
90°	22	18	1	18	22	13
95°	28	23	46	23	28	24
105°	33	163	222	163	33	68
115°	438	428	417	428	438	412
125°	600	597	588	597	600	536
135°	739	739	732	739	739	570
145°	852	851	844	851	852	532
155°	929	929	930	929	929	428
165°	978	978	981	978	978	276
175°	1000	1001	1004	1001	1000	95
180°	1004	1004	1004	1004	1004	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	3159.9	3159.9	3159.9	3159.9	3159.9	3159.9	3159.9	3159.9	3159.9	3159.9	3159.9
2.5°	3561.6	3558.0	3554.3	3536.0	3517.7	3508.9	3500.1	3473.7	3447.3	3417.9	3388.6
5°	3981.0	3991.3	4001.5	3989.8	3978.1	3942.2	3906.2	3858.6	3810.9	3757.4	3703.9
7.5°	4174.6	4180.4	4186.3	4179.0	4171.6	4162.1	4152.6	4110.0	4067.5	4012.5	3957.5
10°	3973.7	3986.9	4000.1	4028.7	4057.3	4089.5	4121.8	4115.9	4110.0	4093.9	4077.8
12.5°	3532.3	3548.4	3564.6	3621.8	3679.0	3752.3	3825.6	3888.6	3951.7	3995.7	4039.7
15°	2935.5	2980.3	3025.0	3077.0	3129.1	3236.9	3344.6	3477.3	3610.0	3728.1	3846.1
17.5°	2417.9	2434.8	2451.7	2507.4	2563.1	2698.7	2834.4	2987.6	3140.8	3336.6	3532.3
20°	1989.8	2005.2	2020.6	2093.9	2167.2	2273.5	2379.8	2552.1	2724.4	2934.8	3145.2
22.5°	1671.6	1695.8	1720.0	1761.0	1802.1	1904.0	2005.9	2159.1	2312.4	2544.8	2777.2
25°	1463.4	1481.0	1498.6	1523.5	1548.4	1629.8	1711.2	1837.3	1963.4	2176.7	2390.1
27.5°	1321.1	1328.5	1335.8	1360.7	1385.7	1438.4	1491.2	1599.7	1708.2	1889.3	2070.4
30°	1209.7	1214.8	1220.0	1242.0	1264.0	1299.9	1335.8	1414.2	1492.7	1652.5	1812.3
32.5°	1132.0	1135.7	1139.3	1156.2	1173.0	1198.7	1224.4	1281.5	1338.7	1470.7	1602.7
35°	1061.6	1063.8	1066.0	1078.5	1090.9	1110.0	1129.1	1172.3	1215.6	1319.7	1423.8
37.5°	1000.0	1003.0	1005.9	1013.2	1020.5	1037.4	1054.3	1088.7	1123.2	1203.1	1283.0
40°	939.9	945.0	950.2	955.3	960.4	974.4	988.3	1014.7	1041.1	1107.1	1173.0
42.5°	888.6	893.7	898.8	901.0	903.2	911.3	919.4	943.6	967.8	1016.9	1066.0
45°	838.7	840.9	843.1	845.3	847.5	854.1	860.7	882.0	903.2	945.8	988.3
47.5°	793.3	793.3	793.3	794.7	796.2	802.1	807.9	823.3	838.7	871.7	904.7
50°	749.3	749.3	749.3	747.1	744.9	748.5	752.2	763.9	775.7	805.0	834.3
52.5°	696.5	696.5	696.5	697.2	698.0	698.0	698.0	708.2	718.5	744.9	771.3
55°	643.7	646.6	649.6	647.4	645.2	646.6	648.1	654.7	661.3	682.6	703.8
57.5°	590.9	592.4	593.9	593.1	592.4	593.1	593.9	599.7	605.6	621.7	637.8
60°	541.1	541.1	541.1	539.6	538.1	539.6	541.1	544.0	546.9	561.6	576.3
62.5°	485.3	486.1	486.8	487.5	488.3	486.8	485.3	489.0	492.7	503.7	514.7
65°	429.6	430.4	431.1	433.3	435.5	434.0	432.6	436.2	439.9	448.0	456.0
67.5°	379.8	378.3	376.8	377.6	378.3	380.5	382.7	383.4	384.2	393.0	401.8
70°	321.1	322.6	324.1	323.3	322.6	323.3	324.1	326.3	328.5	335.0	341.6
72.5°	268.3	269.1	269.8	269.8	269.8	271.3	272.7	274.9	277.1	280.8	284.5
75°	219.9	219.9	219.9	221.4	222.9	223.6	224.3	224.3	224.3	227.3	230.2
77.5°	167.2	170.8	174.5	173.8	173.0	174.5	176.0	178.2	180.4	181.8	183.3
80°	121.7	121.7	121.7	122.4	123.2	125.4	127.6	129.0	130.5	133.4	136.4
82.5°	77.7	78.4	79.2	81.4	83.6	85.0	86.5	88.7	90.9	90.9	90.9
85°	48.4	46.9	45.5	46.9	48.4	49.9	51.3	52.1	52.8	54.3	55.7
87.5°	23.5	23.5	23.5	23.5	23.5	24.2	24.9	24.9	24.9	24.9	24.9
90°	22.4	22.0	21.7	21.4	21.0	20.6	19.9	19.2	18.6	17.9	15.7
92.5°	25.4	25.2	25.0	24.9	24.7	24.0	22.9	21.7	20.6	19.4	17.9
95°	28.3	28.3	28.3	28.3	28.3	27.8	26.6	25.4	24.3	23.1	21.3
97.5°	30.6	30.4	30.2	30.1	29.9	29.2	27.8	26.5	25.2	23.9	32.3
100°	31.3	31.2	31.0	30.8	30.7	29.9	28.6	27.3	25.9	24.6	50.5
102.5°	32.1	31.7	31.4	31.1	30.7	33.3	38.8	44.3	49.7	55.2	84.0
105°	32.8	32.5	32.2	31.8	31.5	46.0	75.3	104.7	134.0	163.3	178.3
107.5°	77.6	99.3	121.0	142.7	164.4	188.0	213.6	239.1	264.6	290.1	287.6
110°	205.1	228.8	252.5	276.2	299.9	314.5	320.0	325.4	330.9	336.4	334.5



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	388.6	388.9	389.2	389.6	389.9	389.3	387.8	386.3	384.8	383.4	381.5
115°	438.5	437.9	437.2	436.6	435.9	434.7	433.1	431.4	429.8	428.1	426.6
117.5°	478.8	478.7	478.5	478.3	478.2	477.4	476.1	474.8	473.4	472.1	471.3
120°	520.6	520.6	520.6	520.6	520.6	519.9	518.6	517.3	515.9	514.6	514.1
122.5°	561.6	561.4	561.3	561.1	560.9	560.5	559.6	558.8	558.0	557.1	556.5
125°	599.6	599.3	599.0	598.7	598.3	598.0	597.7	597.3	597.0	596.7	596.0
127.5°	636.9	637.3	637.6	637.9	638.3	638.2	637.7	637.2	636.7	636.2	635.4
130°	672.7	673.1	673.4	673.7	674.1	673.9	673.2	672.6	671.9	671.2	670.6
132.5°	705.6	706.1	706.6	707.0	707.5	707.5	706.8	706.1	705.5	704.8	704.3
135°	739.1	739.6	740.1	740.6	741.1	741.1	740.6	740.1	739.6	739.1	738.5
137.5°	771.2	771.5	771.9	772.2	772.5	772.3	771.4	770.6	769.8	769.0	768.6
140°	799.5	799.9	800.2	800.5	800.9	800.7	800.0	799.4	798.7	798.0	797.5
142.5°	825.6	826.1	826.6	827.1	827.6	827.6	827.1	826.6	826.1	825.6	825.1
145°	852.5	852.5	852.5	852.5	852.5	852.3	852.0	851.7	851.3	851.0	850.7
147.5°	871.9	872.7	873.5	874.4	875.2	875.4	875.1	874.8	874.4	874.1	873.8
150°	894.3	894.7	895.2	895.7	896.2	896.3	896.0	895.7	895.3	895.0	894.7
152.5°	912.2	913.0	913.8	914.6	915.5	915.6	914.9	914.2	913.6	912.9	912.7
155°	928.6	929.6	930.5	931.5	932.5	932.6	931.8	931.0	930.1	929.3	929.1
157.5°	942.7	944.1	945.4	946.7	948.0	948.2	947.2	946.2	945.2	944.2	944.4
160°	956.2	957.3	958.5	959.6	960.8	960.9	959.9	958.9	957.9	956.9	957.1
162.5°	968.8	969.8	970.8	971.8	972.8	972.7	971.6	970.4	969.3	968.1	968.3
165°	978.5	979.7	980.9	982.0	983.2	983.1	981.8	980.4	979.1	977.8	978.0
167.5°	986.0	987.3	988.6	990.0	991.3	991.3	990.0	988.6	987.3	986.0	986.0
170°	992.7	994.0	995.4	996.7	998.0	998.0	996.7	995.4	994.0	992.7	992.7
172.5°	996.4	997.9	999.4	1000.9	1002.4	1002.5	1001.2	999.8	998.5	997.2	997.0
175°	1000.2	1001.5	1002.8	1004.1	1005.5	1005.5	1004.4	1003.2	1002.1	1000.9	1000.7
177.5°	1000.9	1002.6	1004.2	1005.9	1007.5	1007.7	1006.4	1005.0	1003.7	1002.4	1002.2
180°	1003.9	1003.9	1003.9	1003.9	1003.9	1003.9	1003.9	1003.9	1003.9	1003.9	1003.9



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	3159.9	3159.9	3159.9	3159.9	3159.9	3159.9	3159.9	3159.9	3159.9	3159.9	3159.9
2.5°	3379.8	3371.0	3338.8	3306.5	3269.9	3233.2	3206.1	3178.9	3138.6	3098.3	3065.3
5°	3662.8	3621.8	3553.6	3485.4	3393.0	3300.6	3238.3	3176.0	3092.4	3008.9	2942.1
7.5°	3887.2	3816.8	3721.5	3626.2	3505.2	3384.2	3269.9	3155.5	3027.9	2900.3	2796.2
10°	4030.1	3982.5	3872.5	3762.5	3600.5	3438.5	3278.6	3118.8	2954.6	2790.4	2652.5
12.5°	4044.1	4048.5	3947.3	3846.1	3662.8	3479.5	3285.2	3091.0	2884.2	2677.5	2516.9
15°	3921.6	3997.1	3941.4	3885.7	3700.9	3516.2	3277.2	3038.2	2799.9	2561.6	2376.1
17.5°	3694.3	3856.4	3864.4	3872.5	3687.7	3503.0	3238.3	2973.7	2703.9	2434.1	2239.0
20°	3384.2	3623.2	3705.3	3787.5	3637.2	3486.9	3202.4	2917.9	2615.9	2313.8	2109.3
22.5°	3067.5	3357.8	3508.1	3658.4	3547.0	3435.5	3132.8	2830.0	2511.0	2192.1	1984.6
25°	2706.8	3023.5	3254.5	3485.4	3417.2	3349.0	3050.6	2752.2	2412.8	2073.4	1861.5
27.5°	2392.3	2714.1	2992.7	3271.3	3256.7	3242.0	2945.8	2649.6	2302.1	1954.6	1750.0
30°	2112.2	2412.1	2723.7	3035.2	3071.2	3107.1	2821.2	2535.2	2187.0	1838.7	1641.5
32.5°	1864.4	2126.1	2460.5	2794.8	2865.2	2935.5	2677.5	2419.4	2074.8	1730.2	1540.3
35°	1661.3	1898.9	2233.2	2567.5	2655.5	2743.4	2519.1	2294.8	1959.0	1623.2	1442.1
37.5°	1481.7	1680.4	2006.6	2332.9	2440.7	2548.4	2347.5	2146.7	1832.1	1517.6	1351.2
40°	1332.9	1492.7	1792.6	2092.4	2217.0	2341.7	2176.0	2010.3	1711.9	1413.5	1260.3
42.5°	1208.2	1350.5	1622.5	1894.5	2014.0	2133.5	1993.4	1853.4	1588.0	1322.6	1182.6
45°	1101.9	1215.6	1462.6	1709.7	1823.3	1937.0	1816.7	1696.5	1462.6	1228.8	1098.3
47.5°	1002.2	1099.7	1310.9	1522.0	1623.2	1724.4	1630.5	1536.7	1338.7	1140.8	1022.7
50°	912.8	991.2	1176.0	1360.7	1448.7	1536.7	1453.8	1371.0	1208.2	1045.5	942.8
52.5°	835.1	898.8	1053.5	1208.2	1283.7	1359.3	1288.1	1217.0	1088.0	959.0	869.5
55°	758.1	812.3	946.5	1080.7	1132.0	1183.3	1128.3	1073.3	969.2	865.1	789.6
57.5°	686.2	734.6	844.6	954.6	994.2	1033.7	983.9	934.0	855.6	777.1	714.1
60°	615.8	655.4	747.1	838.7	862.9	887.1	846.8	806.5	751.5	696.5	640.0
62.5°	550.6	586.5	654.7	722.9	739.0	755.1	724.4	693.6	651.8	610.0	566.0
65°	483.1	510.3	566.0	621.7	632.0	642.2	615.1	588.0	556.5	524.9	492.7
67.5°	420.8	439.9	485.3	530.8	531.5	532.3	510.3	488.3	470.7	453.1	427.4
70°	360.0	378.3	408.4	438.4	439.2	439.9	422.3	404.7	391.5	378.3	359.2
72.5°	297.7	310.9	333.6	356.3	354.8	353.4	342.4	331.4	321.1	310.9	296.9
75°	241.2	252.2	267.6	283.0	278.6	274.2	268.3	262.5	253.7	244.9	236.1
77.5°	189.9	196.5	205.3	214.1	211.1	208.2	203.1	198.0	191.4	184.8	181.1
80°	139.3	142.2	148.1	154.0	152.5	151.0	145.2	139.3	137.8	136.4	131.2
82.5°	94.6	98.2	99.7	101.2	100.4	99.7	95.3	90.9	89.4	88.0	87.2
85°	56.5	57.2	57.9	58.7	56.5	54.3	52.8	51.3	51.3	51.3	50.6
87.5°	25.7	26.4	26.4	26.4	25.7	24.9	23.5	22.0	22.7	23.5	23.5
90°	13.6	11.4	9.3	7.4	5.7	4.1	2.4	0.7	2.4	4.1	5.7
92.5°	16.4	14.9	13.4	13.2	14.2	15.2	16.2	17.2	16.2	15.2	14.2
95°	19.5	17.7	15.8	18.3	25.1	31.9	38.7	45.5	38.7	31.9	25.1
97.5°	40.8	49.2	57.7	64.2	68.9	73.5	78.1	82.8	78.1	73.5	68.9
100°	76.3	102.2	128.0	139.3	136.0	132.7	129.4	126.0	129.4	132.7	136.0
102.5°	112.9	141.7	170.5	183.9	181.7	179.6	177.4	175.3	177.4	179.6	181.7
105°	193.2	208.1	223.0	229.6	227.7	225.9	224.1	222.3	224.1	225.9	227.7
107.5°	285.2	282.7	280.2	278.2	276.7	275.2	273.7	272.2	273.7	275.2	276.7
110°	332.7	330.9	329.1	327.5	326.2	324.9	323.5	322.2	323.5	324.9	326.2





TEST NUMBER: P831312

CATALOG NUMBER: S123DIP-S1165D805U950-4F0-1E-UDD-G

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	379.7	377.9	376.1	374.6	373.4	372.3	371.1	369.9	371.1	372.3	373.4
115°	425.1	423.6	422.1	420.9	419.9	418.9	417.9	416.9	417.9	418.9	419.9
117.5°	470.5	469.6	468.8	467.8	466.6	465.5	464.3	463.2	464.3	465.5	466.6
120°	513.6	513.1	512.6	511.6	510.1	508.7	507.2	505.7	507.2	508.7	510.1
122.5°	555.8	555.1	554.5	553.6	552.4	551.3	550.1	548.9	550.1	551.3	552.4
125°	595.3	594.7	594.0	593.0	591.7	590.4	589.0	587.7	589.0	590.4	591.7
127.5°	634.5	633.7	632.9	631.8	630.5	629.2	627.8	626.5	627.8	629.2	630.5
130°	669.9	669.3	668.6	667.6	666.3	665.0	663.6	662.3	663.6	665.0	666.3
132.5°	703.8	703.3	702.8	701.9	700.6	699.3	697.9	696.6	697.9	699.3	700.6
135°	737.8	737.1	736.5	735.6	734.6	733.7	732.7	731.7	732.7	733.7	734.6
137.5°	768.3	768.0	767.6	766.8	765.5	764.1	762.8	761.5	762.8	764.1	765.5
140°	797.0	796.5	796.1	795.3	794.3	793.3	792.3	791.3	792.3	793.3	794.3
142.5°	824.6	824.1	823.6	822.9	821.9	820.9	819.9	818.9	819.9	820.9	821.9
145°	850.3	850.0	849.7	848.9	847.8	846.6	845.4	844.3	845.4	846.6	847.8
147.5°	873.5	873.1	872.8	872.2	871.4	870.6	869.7	868.9	869.7	870.6	871.4
150°	894.3	894.0	893.7	893.3	892.8	892.3	891.8	891.3	891.8	892.3	892.8
152.5°	912.6	912.4	912.2	912.1	911.9	911.7	911.6	911.4	911.6	911.7	911.9
155°	929.0	928.8	928.6	928.7	929.1	929.4	929.7	930.1	929.7	929.4	929.1
157.5°	944.6	944.7	944.9	945.0	945.0	945.0	945.0	945.0	945.0	945.0	945.0
160°	957.2	957.4	957.6	957.7	957.9	958.1	958.2	958.4	958.2	958.1	957.9
162.5°	968.4	968.6	968.8	969.1	969.6	970.1	970.6	971.1	970.6	970.1	969.6
165°	978.1	978.3	978.4	978.8	979.3	979.8	980.3	980.8	980.3	979.8	979.3
167.5°	986.0	986.0	986.0	986.3	987.0	987.6	988.3	989.0	988.3	987.6	987.0
170°	992.7	992.7	992.7	993.0	993.7	994.4	995.0	995.7	995.0	994.4	993.7
172.5°	996.8	996.7	996.5	996.8	997.7	998.5	999.3	1000.2	999.3	998.5	997.7
175°	1000.6	1000.4	1000.2	1000.6	1001.4	1002.2	1003.1	1003.9	1003.1	1002.2	1001.4
177.5°	1002.1	1001.9	1001.7	1002.1	1002.9	1003.7	1004.6	1005.4	1004.6	1003.7	1002.9
180°	1003.9	1003.9	1003.9	1003.9	1003.9	1003.9	1003.9	1003.9	1003.9	1003.9	1003.9



TEST NUMBER: P831312

CATALOG NUMBER: S123DIP-S1165D805U950-4F0-1E-UDD-G

**CANDELA DISTRIBUTION (continued):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	3159.9	3159.9	3159.9	3159.9	3159.9	3159.9	3159.9	3159.9	3159.9	3159.9	3159.9
2.5°	3032.3	3003.7	2975.1	2953.1	2931.1	2893.7	2856.4	2847.6	2838.8	2826.3	2813.8
5°	2875.4	2805.0	2734.7	2671.6	2608.6	2559.4	2510.3	2478.0	2445.8	2422.3	2398.9
7.5°	2692.1	2586.6	2481.0	2406.2	2331.4	2260.3	2189.2	2166.5	2143.7	2112.9	2082.1
10°	2514.7	2398.1	2281.6	2184.1	2086.5	2016.9	1947.2	1919.4	1891.5	1852.7	1813.8
12.5°	2356.3	2228.8	2101.2	2003.0	1904.7	1837.3	1769.8	1729.5	1689.2	1667.2	1645.2
15°	2190.7	2054.3	1917.9	1827.0	1736.1	1675.2	1614.4	1579.2	1544.0	1522.8	1501.5
17.5°	2044.0	1909.1	1774.2	1687.0	1599.7	1544.0	1488.3	1457.5	1426.7	1410.6	1394.5
20°	1904.7	1772.8	1640.8	1555.7	1470.7	1425.2	1379.8	1360.0	1340.2	1327.0	1313.8
22.5°	1777.2	1647.4	1517.6	1445.0	1372.5	1335.8	1299.1	1285.2	1271.3	1260.3	1249.3
25°	1649.6	1533.8	1417.9	1356.3	1294.7	1264.7	1234.6	1220.7	1206.8	1195.8	1184.8
27.5°	1545.5	1434.8	1324.1	1271.3	1218.5	1195.0	1171.6	1160.6	1149.6	1139.3	1129.1
30°	1444.3	1345.3	1246.4	1200.9	1155.4	1134.2	1112.9	1101.9	1090.9	1081.4	1071.9
32.5°	1350.5	1265.4	1180.4	1138.6	1096.8	1079.2	1061.6	1048.4	1035.2	1027.9	1020.5
35°	1261.0	1184.8	1108.5	1074.1	1039.6	1022.0	1004.4	993.4	982.4	976.6	970.7
37.5°	1184.8	1116.6	1048.4	1015.4	982.4	965.6	948.7	939.2	929.6	927.4	925.2
40°	1107.1	1048.4	989.8	957.5	925.2	910.6	895.9	890.0	884.2	882.7	881.2
42.5°	1042.5	985.4	928.2	898.8	869.5	857.1	844.6	841.7	838.7	840.9	843.1
45°	967.8	920.1	872.4	845.3	818.2	807.9	797.7	795.5	793.3	797.7	802.1
47.5°	904.7	860.7	816.7	791.1	765.4	758.1	750.7	750.0	749.3	755.1	761.0
50°	840.2	797.7	755.1	734.6	714.1	707.5	700.9	703.1	705.3	714.8	724.4
52.5°	780.1	740.5	700.9	681.8	662.8	658.4	654.0	659.1	664.2	674.5	684.8
55°	714.1	678.2	642.2	627.6	612.9	608.5	604.1	614.4	624.6	634.2	643.7
57.5°	651.0	619.5	588.0	574.8	561.6	560.9	560.1	569.7	579.2	589.5	599.7
60°	583.6	557.2	530.8	520.5	510.3	511.7	513.2	524.2	535.2	543.3	551.3
62.5°	522.0	500.0	478.0	468.5	459.0	462.6	466.3	477.3	488.3	497.8	507.3
65°	460.4	442.1	423.8	417.2	410.6	415.7	420.8	430.4	439.9	446.5	453.1
67.5°	401.8	386.4	371.0	365.8	360.7	365.8	371.0	380.5	390.0	396.6	403.2
70°	340.2	327.7	315.3	311.6	307.9	313.8	319.7	327.7	335.8	342.4	349.0
72.5°	283.0	273.5	263.9	263.2	262.5	267.6	272.7	280.8	288.9	293.3	297.7
75°	227.3	222.1	217.0	216.3	215.5	220.7	225.8	230.2	234.6	238.3	241.9
77.5°	177.4	173.0	168.6	169.4	170.1	173.8	177.4	181.8	186.2	188.4	190.6
80°	126.1	124.6	123.2	124.6	126.1	129.0	132.0	134.9	137.8	139.3	140.8
82.5°	86.5	85.0	83.6	85.8	88.0	90.2	92.4	94.6	96.8	97.5	98.2
85°	49.9	52.1	54.3	54.3	54.3	55.0	55.7	56.5	57.2	56.5	55.7
87.5°	23.5	24.2	24.9	24.9	24.9	25.7	26.4	26.4	26.4	25.7	24.9
90°	7.4	9.3	11.4	13.6	15.7	17.9	18.6	19.2	19.9	20.6	21.0
92.5°	13.2	13.4	14.9	16.4	17.9	19.4	20.6	21.7	22.9	24.0	24.7
95°	18.3	15.8	17.7	19.5	21.3	23.1	24.3	25.4	26.6	27.8	28.3
97.5°	64.2	57.7	49.2	40.8	32.3	23.9	25.2	26.5	27.8	29.2	29.9
100°	139.3	128.0	102.2	76.3	50.5	24.6	25.9	27.3	28.6	29.9	30.7
102.5°	183.9	170.5	141.7	112.9	84.0	55.2	49.7	44.3	38.8	33.3	30.7
105°	229.6	223.0	208.1	193.2	178.3	163.3	134.0	104.7	75.3	46.0	31.5
107.5°	278.2	280.2	282.7	285.2	287.6	290.1	264.6	239.1	213.6	188.0	164.4
110°	327.5	329.1	330.9	332.7	334.5	336.4	330.9	325.4	320.0	314.5	299.9



TEST NUMBER: P831312

CATALOG NUMBER: S123DIP-S1165D805U950-4F0-1E-UDD-G

**CANDELA DISTRIBUTION (continued):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	374.6	376.1	377.9	379.7	381.5	383.4	384.8	386.3	387.8	389.3	389.9
115°	420.9	422.1	423.6	425.1	426.6	428.1	429.8	431.4	433.1	434.7	435.9
117.5°	467.8	468.8	469.6	470.5	471.3	472.1	473.4	474.8	476.1	477.4	478.2
120°	511.6	512.6	513.1	513.6	514.1	514.6	515.9	517.3	518.6	519.9	520.6
122.5°	553.6	554.5	555.1	555.8	556.5	557.1	558.0	558.8	559.6	560.5	560.9
125°	593.0	594.0	594.7	595.3	596.0	596.7	597.0	597.3	597.7	598.0	598.3
127.5°	631.8	632.9	633.7	634.5	635.4	636.2	636.7	637.2	637.7	638.2	638.3
130°	667.6	668.6	669.3	669.9	670.6	671.2	671.9	672.6	673.2	673.9	674.1
132.5°	701.9	702.8	703.3	703.8	704.3	704.8	705.5	706.1	706.8	707.5	707.5
135°	735.6	736.5	737.1	737.8	738.5	739.1	739.6	740.1	740.6	741.1	741.1
137.5°	766.8	767.6	768.0	768.3	768.6	769.0	769.8	770.6	771.4	772.3	772.5
140°	795.3	796.1	796.5	797.0	797.5	798.0	798.7	799.4	800.0	800.7	800.9
142.5°	822.9	823.6	824.1	824.6	825.1	825.6	826.1	826.6	827.1	827.6	827.6
145°	848.9	849.7	850.0	850.3	850.7	851.0	851.3	851.7	852.0	852.3	852.5
147.5°	872.2	872.8	873.1	873.5	873.8	874.1	874.4	874.8	875.1	875.4	875.2
150°	893.3	893.7	894.0	894.3	894.7	895.0	895.3	895.7	896.0	896.3	896.2
152.5°	912.1	912.2	912.4	912.6	912.7	912.9	913.6	914.2	914.9	915.6	915.5
155°	928.7	928.6	928.8	929.0	929.1	929.3	930.1	931.0	931.8	932.6	932.5
157.5°	945.0	944.9	944.7	944.6	944.4	944.2	945.2	946.2	947.2	948.2	948.0
160°	957.7	957.6	957.4	957.2	957.1	956.9	957.9	958.9	959.9	960.9	960.8
162.5°	969.1	968.8	968.6	968.4	968.3	968.1	969.3	970.4	971.6	972.7	972.8
165°	978.8	978.4	978.3	978.1	978.0	977.8	979.1	980.4	981.8	983.1	983.2
167.5°	986.3	986.0	986.0	986.0	986.0	986.0	987.3	988.6	990.0	991.3	991.3
170°	993.0	992.7	992.7	992.7	992.7	992.7	994.0	995.4	996.7	998.0	998.0
172.5°	996.8	996.5	996.7	996.8	997.0	997.2	998.5	999.8	1001.2	1002.5	1002.4
175°	1000.6	1000.2	1000.4	1000.6	1000.7	1000.9	1002.1	1003.2	1004.4	1005.5	1005.5
177.5°	1002.1	1001.7	1001.9	1002.1	1002.2	1002.4	1003.7	1005.0	1006.4	1007.7	1007.5
180°	1003.9	1003.9	1003.9	1003.9	1003.9	1003.9	1003.9	1003.9	1003.9	1003.9	1003.9



TEST NUMBER: P831312

CATALOG NUMBER: S123DIP-S1165D805U950-4F0-1E-UDD-G

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
0°	3159.9	3159.9	3159.9	3159.9
2.5°	2808.7	2803.6	2783.0	2762.5
5°	2381.3	2363.7	2357.8	2351.9
7.5°	2080.7	2079.2	2048.4	2017.6
10°	1816.0	1818.2	1790.4	1762.5
12.5°	1626.9	1608.5	1606.3	1604.1
15°	1484.6	1467.8	1464.8	1461.9
17.5°	1384.2	1373.9	1371.0	1368.1
20°	1307.9	1302.1	1296.9	1291.8
22.5°	1242.0	1234.6	1230.2	1225.8
25°	1178.2	1171.6	1170.1	1168.6
27.5°	1121.0	1112.9	1112.9	1112.9
30°	1066.7	1061.6	1059.4	1057.2
32.5°	1016.1	1011.7	1011.7	1011.7
35°	968.5	966.3	963.4	960.4
37.5°	925.2	925.2	923.8	922.3
40°	883.4	885.6	885.6	885.6
42.5°	845.3	847.5	847.5	847.5
45°	805.7	809.4	810.9	812.3
47.5°	766.9	772.7	774.2	775.7
50°	728.8	733.2	733.9	734.6
52.5°	689.9	695.0	698.7	702.4
55°	648.8	654.0	656.2	658.4
57.5°	604.8	610.0	610.7	611.4
60°	556.5	561.6	563.1	564.5
62.5°	510.3	513.2	514.7	516.1
65°	457.5	461.9	464.8	467.8
67.5°	406.9	410.6	410.6	410.6
70°	350.4	351.9	354.1	356.3
72.5°	298.4	299.1	299.1	299.1
75°	243.4	244.9	245.6	246.3
77.5°	191.4	192.1	192.1	192.1
80°	140.0	139.3	139.3	139.3
82.5°	96.0	93.8	93.8	93.8
85°	55.0	54.3	55.0	55.7
87.5°	24.9	24.9	24.9	24.9
90°	21.4	21.7	22.0	22.4
92.5°	24.9	25.0	25.2	25.4
95°	28.3	28.3	28.3	28.3
97.5°	30.1	30.2	30.4	30.6
100°	30.8	31.0	31.2	31.3
102.5°	31.1	31.4	31.7	32.1
105°	31.8	32.2	32.5	32.8
107.5°	142.7	121.0	99.3	77.6
110°	276.2	252.5	228.8	205.1



TEST NUMBER: P831312

CATALOG NUMBER: S123DIP-S1165D805U950-4F0-1E-UDD-G

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
112.5°	389.6	389.2	388.9	388.6
115°	436.6	437.2	437.9	438.5
117.5°	478.3	478.5	478.7	478.8
120°	520.6	520.6	520.6	520.6
122.5°	561.1	561.3	561.4	561.6
125°	598.7	599.0	599.3	599.6
127.5°	637.9	637.6	637.3	636.9
130°	673.7	673.4	673.1	672.7
132.5°	707.0	706.6	706.1	705.6
135°	740.6	740.1	739.6	739.1
137.5°	772.2	771.9	771.5	771.2
140°	800.5	800.2	799.9	799.5
142.5°	827.1	826.6	826.1	825.6
145°	852.5	852.5	852.5	852.5
147.5°	874.4	873.5	872.7	871.9
150°	895.7	895.2	894.7	894.3
152.5°	914.6	913.8	913.0	912.2
155°	931.5	930.5	929.6	928.6
157.5°	946.7	945.4	944.1	942.7
160°	959.6	958.5	957.3	956.2
162.5°	971.8	970.8	969.8	968.8
165°	982.0	980.9	979.7	978.5
167.5°	990.0	988.6	987.3	986.0
170°	996.7	995.4	994.0	992.7
172.5°	1000.9	999.4	997.9	996.4
175°	1004.1	1002.8	1001.5	1000.2
177.5°	1005.9	1004.2	1002.6	1000.9
180°	1003.9	1003.9	1003.9	1003.9



TEST NUMBER: P831312

CATALOG NUMBER: S123DIP-S1165D805U950-4F0-1E-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	16.91	17.85	17.76	18.71	19.80	19.15	20.08	20.00	20.95	22.03
	3H	18.56	19.40	19.43	20.28	21.39	20.58	21.41	21.44	22.29	23.40
	4H	19.14	19.93	20.02	20.82	21.94	21.03	21.82	21.91	22.70	23.83
	6H	19.52	20.25	20.41	21.14	22.27	21.31	22.04	22.20	22.93	24.06
	8H	19.62	20.31	20.51	21.22	22.35	21.37	22.07	22.27	22.97	24.11
	12H	19.66	20.32	20.57	21.22	22.38	21.40	22.06	22.30	22.96	24.12
4H	2H	17.49	18.28	18.38	19.17	20.29	19.32	20.11	20.20	20.99	22.12
	3H	19.33	19.99	20.22	20.90	22.04	20.94	21.60	21.84	22.52	23.65
	4H	20.03	20.63	20.94	21.54	22.70	21.53	22.13	22.44	23.04	24.21
	6H	20.51	21.03	21.43	21.96	23.13	21.94	22.46	22.86	23.39	24.56
	8H	20.65	21.13	21.57	22.06	23.24	22.05	22.53	22.97	23.46	24.64
	12H	20.72	21.15	21.66	22.10	23.28	22.10	22.53	23.04	23.48	24.67
8H	4H	20.30	20.78	21.22	21.71	22.89	21.64	22.12	22.56	23.05	24.23
	6H	20.89	21.29	21.84	22.26	23.44	22.15	22.55	23.10	23.52	24.69
	8H	21.10	21.45	22.06	22.41	23.61	22.33	22.68	23.29	23.64	24.84
	12H	21.23	21.54	22.19	22.49	23.74	22.43	22.74	23.39	23.70	24.94
12H	4H	20.31	20.74	21.25	21.69	22.87	21.62	22.05	22.56	23.00	24.19
	6H	20.94	21.30	21.90	22.26	23.45	22.16	22.51	23.12	23.48	24.67
	8H	21.18	21.49	22.14	22.44	23.69	22.36	22.67	23.33	23.63	24.87