

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: P831146

Luminaire Tested: S123DIP-S1000D585U935-4F0-1E-UDD-G4

Issue Date: 05/03/2024

Test Information

Test Method: LM-79-2019
Report Number: P831146
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-S1000D585U935-4F0-1E-UDD-G4
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT, GRAZE OPTIC
UPLIGHT 585 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: -

Summary

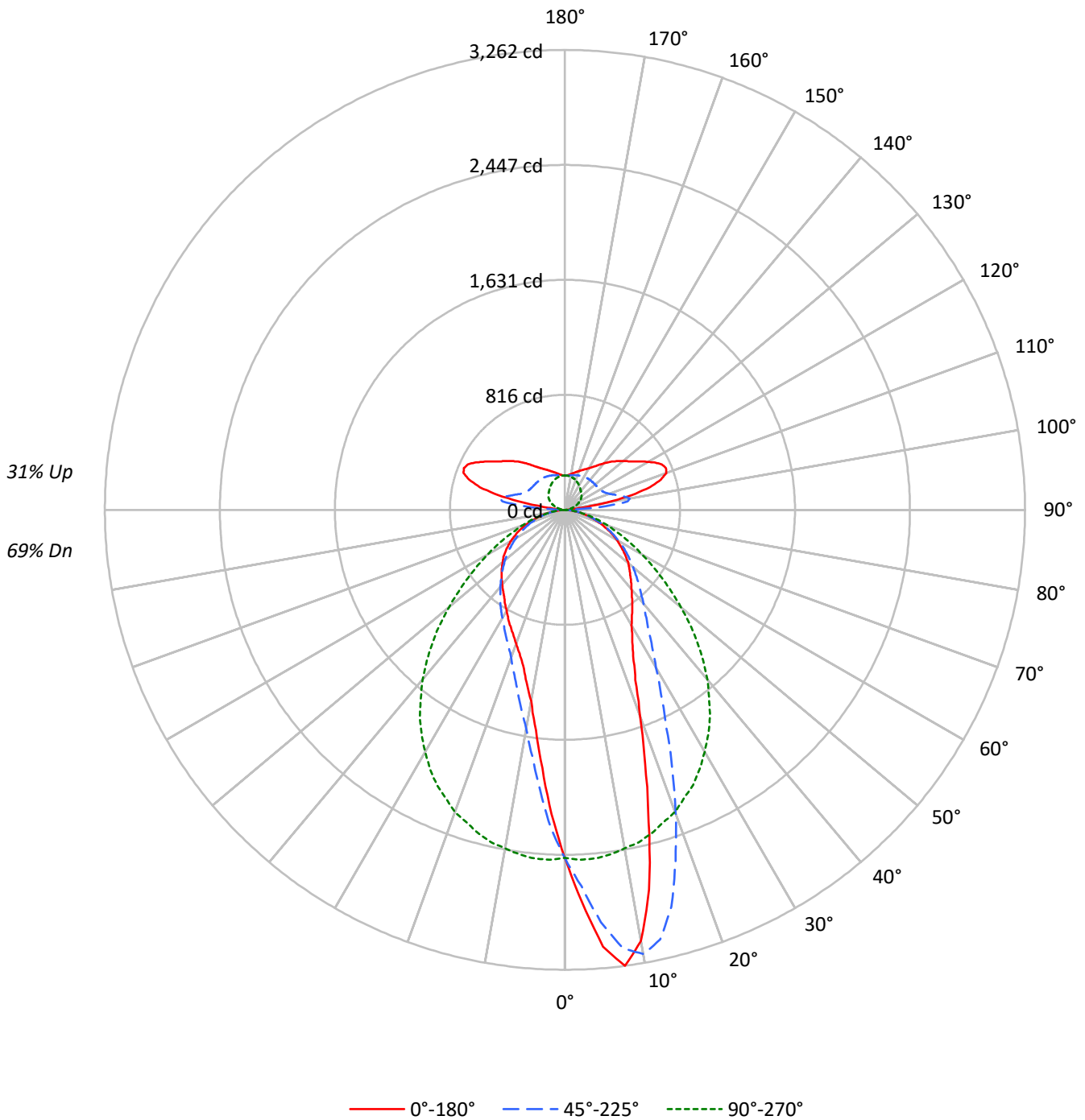
Lumens per Lamp: N/A
Luminaire Lumens: 5795.6 lumens
Efficiency: N/A
Efficacy: 115.2 lumens/watt
Spacing Criteria (0/90/45): 0.65 / 1.19 / 0.89
Luminous Opening: Rectangular (W 4' x L: 0.25' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 50.3
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	112	112	112	112	105	105	105	105	94	94	94	83	83	83	73	73	73	69				
1	103	98	95	91	97	93	90	87	83	81	78	74	72	71	66	64	63	59				
2	94	87	81	76	89	82	77	73	74	70	66	66	63	60	59	56	54	51				
3	86	77	70	64	81	73	67	62	66	61	57	59	55	52	53	50	47	44				
4	80	69	61	55	75	66	59	53	59	54	49	53	49	45	48	44	42	39				
5	74	62	54	48	69	59	52	47	54	48	43	49	44	40	44	40	37	34				
6	68	56	48	43	64	54	47	41	49	43	39	44	40	36	40	36	33	31				
7	64	51	44	38	60	49	42	37	45	39	35	41	36	32	37	33	30	28				
8	59	47	40	34	56	45	38	33	41	35	31	38	33	29	34	30	27	25				
9	56	43	36	31	53	42	35	30	38	32	28	35	30	27	32	28	25	23				
10	52	40	33	28	49	39	32	28	36	30	26	33	28	25	30	26	23	21				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	26579	26579	26579	26579	26579
5°	33613	31726	26817	21610	19859
10°	33940	34967	26639	17227	15054
15°	25563	32465	26457	14588	12730
20°	17811	26270	26119	12757	11564
25°	13581	20202	25543	11738	10846
30°	11749	16051	24623	11016	10268
35°	10901	13550	23563	10494	9862
40°	10321	12156	22073	9999	9725
45°	9977	11251	20180	9611	9663
50°	9805	10535	17941	9259	9614
55°	9439	10010	15739	8923	9655
60°	9102	9449	13567	8609	9496
65°	8550	8917	11703	8273	9309
70°	7896	8239	9951	7717	8762
75°	7149	7386	8530	7170	8006
80°	5895	6465	6750	6248	6750
85°	4668	5236	4952	5311	5372

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 80°
 Vertical Angle: 45°
 Luminance: 23041 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	233.4	4.0
10°-20°	580.8	10.0
20°-30°	687.6	11.9
30°-40°	691.4	11.9
40°-50°	634.3	10.9
50°-60°	523.6	9.0
60°-70°	370.4	6.4
70°-80°	197.7	3.4
80°-90°	51.5	0.9
90°-100°	131.6	2.3
100°-110°	385.4	6.7
110°-120°	376.4	6.5
120°-130°	299.7	5.2
130°-140°	236.5	4.1
140°-150°	176.4	3.0
150°-160°	123.0	2.1
160°-170°	72.3	1.2
170°-180°	23.5	0.4
0°-30°	1501.8	25.9
0°-40°	2193.3	37.8
0°-60°	3351.2	57.8
0°-90°	3970.7	68.5
90°-120°	893.4	15.4
90°-150°	1606.1	27.7
90°-180°	1825.0	31.5
0°-180°	5795.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2469	2469	2469	2469	2469	
5°	3111	2936	2482	2000	1838	296
15°	2294	2913	2374	1309	1142	634
25°	1144	1701	2151	988	913	540
35°	830	1031	1793	799	750	521
45°	655	739	1326	631	635	508
55°	503	533	839	476	514	450
65°	336	350	460	325	366	334
75°	172	178	205	172	192	181
85°	38	42	40	43	44	42
90°	14	12	1	12	14	10
95°	57	291	17	291	57	93
105°	625	395	57	395	625	623
115°	760	302	101	302	760	741
125°	599	282	140	282	599	542
135°	486	278	164	278	486	377
145°	380	274	187	274	380	241
155°	315	266	213	266	315	147
165°	274	254	232	254	274	78
175°	247	244	242	244	247	24
180°	243	243	243	243	243	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	2469.3	2469.3	2469.3	2469.3	2469.3	2469.3	2469.3	2469.3	2469.3	2469.3	2469.3
2.5°	2783.2	2780.4	2777.5	2763.2	2748.8	2742.0	2735.1	2714.5	2693.8	2670.9	2648.0
5°	3110.9	3119.0	3127.0	3117.8	3108.6	3080.6	3052.5	3015.3	2978.0	2936.2	2894.4
7.5°	3262.2	3266.8	3271.3	3265.6	3259.9	3252.4	3245.0	3211.8	3178.5	3135.6	3092.6
10°	3105.2	3115.5	3125.8	3148.2	3170.5	3195.7	3220.9	3216.3	3211.8	3199.2	3186.6
12.5°	2760.3	2772.9	2785.5	2830.2	2874.9	2932.2	2989.5	3038.7	3088.0	3122.4	3156.8
15°	2294.0	2328.9	2363.8	2404.5	2445.2	2529.4	2613.6	2717.3	2821.0	2913.3	3005.5
17.5°	1889.5	1902.7	1915.8	1959.4	2002.9	2108.9	2214.9	2334.6	2454.4	2607.3	2760.3
20°	1554.9	1566.9	1579.0	1636.2	1693.5	1776.6	1859.7	1994.3	2129.0	2293.4	2457.8
22.5°	1306.2	1325.2	1344.1	1376.1	1408.2	1487.9	1567.5	1687.2	1807.0	1988.6	2170.2
25°	1143.5	1157.3	1171.0	1190.5	1210.0	1273.6	1337.2	1435.7	1534.3	1701.0	1867.7
27.5°	1032.4	1038.1	1043.9	1063.3	1082.8	1124.1	1165.3	1250.1	1334.9	1476.4	1617.9
30°	945.3	949.3	953.3	970.5	987.7	1015.8	1043.9	1105.2	1166.5	1291.4	1416.2
32.5°	884.6	887.4	890.3	903.5	916.7	936.7	956.8	1001.5	1046.1	1149.3	1252.4
35°	829.6	831.3	833.0	842.8	852.5	867.4	882.3	916.1	949.9	1031.2	1112.6
37.5°	781.5	783.7	786.0	791.8	797.5	810.7	823.9	850.8	877.7	940.2	1002.6
40°	734.5	738.5	742.5	746.5	750.5	761.4	772.3	792.9	813.5	865.1	916.7
42.5°	694.4	698.4	702.4	704.1	705.8	712.1	718.4	737.3	756.2	794.6	833.0
45°	655.4	657.1	658.9	660.6	662.3	667.4	672.6	689.2	705.8	739.1	772.3
47.5°	619.9	619.9	619.9	621.0	622.2	626.8	631.4	643.4	655.4	681.2	707.0
50°	585.5	585.5	585.5	583.8	582.1	584.9	587.8	597.0	606.1	629.1	652.0
52.5°	544.3	544.3	544.3	544.8	545.4	545.4	545.4	553.4	561.5	582.1	602.7
55°	503.0	505.3	507.6	505.9	504.2	505.3	506.5	511.6	516.8	533.4	550.0
57.5°	461.8	462.9	464.1	463.5	462.9	463.5	464.1	468.6	473.2	485.8	498.4
60°	422.8	422.8	422.8	421.7	420.5	421.7	422.8	425.1	427.4	438.9	450.3
62.5°	379.3	379.8	380.4	381.0	381.6	380.4	379.3	382.1	385.0	393.6	402.2
65°	335.7	336.3	336.9	338.6	340.3	339.2	338.0	340.9	343.7	350.1	356.4
67.5°	296.8	295.6	294.5	295.1	295.6	297.3	299.1	299.6	300.2	307.1	314.0
70°	250.9	252.1	253.2	252.7	252.1	252.7	253.2	254.9	256.7	261.8	267.0
72.5°	209.7	210.3	210.8	210.8	210.8	212.0	213.1	214.8	216.6	219.4	222.3
75°	171.9	171.9	171.9	173.0	174.2	174.7	175.3	175.3	175.3	177.6	179.9
77.5°	130.6	133.5	136.4	135.8	135.2	136.4	137.5	139.2	140.9	142.1	143.2
80°	95.1	95.1	95.1	95.7	96.2	98.0	99.7	100.8	102.0	104.3	106.6
82.5°	60.7	61.3	61.9	63.6	65.3	66.5	67.6	69.3	71.0	71.0	71.0
85°	37.8	36.7	35.5	36.7	37.8	39.0	40.1	40.7	41.2	42.4	43.5
87.5°	18.3	18.3	18.3	18.3	18.3	18.9	19.5	19.5	19.5	19.5	19.5
90°	14.2	14.7	14.2	13.8	14.2	13.3	12.8	12.3	11.8	12.3	10.8
92.5°	26.0	27.0	26.5	28.5	29.5	32.9	37.8	48.6	68.3	91.3	101.2
95°	57.0	58.9	62.4	66.8	76.1	93.8	119.8	176.8	236.2	291.2	259.3
97.5°	116.9	122.3	134.1	152.7	185.6	241.6	306.4	406.1	463.1	447.9	334.4
100°	307.9	307.4	326.6	362.4	412.0	481.8	539.2	579.0	561.8	465.1	314.3
102.5°	487.7	501.9	517.1	543.6	579.5	617.3	644.8	636.5	566.7	433.1	284.8
105°	624.7	627.1	642.8	661.5	684.1	696.9	687.5	638.4	535.8	394.8	261.8
107.5°	714.0	719.4	725.8	734.7	737.6	724.4	686.1	609.0	491.6	361.0	245.1
110°	765.1	766.1	767.1	763.2	749.4	715.0	653.2	562.8	450.3	333.0	236.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	775.4	774.9	770.0	755.8	727.8	681.1	609.9	517.1	414.5	314.3	231.3
115°	759.7	757.3	747.4	725.8	689.0	635.5	563.3	477.8	387.0	302.0	230.8
117.5°	725.3	721.9	707.2	683.1	644.8	589.3	523.0	447.4	368.8	293.7	231.3
120°	680.2	677.2	665.4	637.9	599.1	549.5	490.6	424.3	355.1	288.3	233.3
122.5°	637.9	634.0	620.7	596.7	563.3	518.1	464.6	406.1	343.8	284.8	236.7
125°	599.1	595.7	583.4	561.8	530.4	491.1	443.9	390.4	334.4	281.9	240.1
127.5°	565.7	562.8	551.5	532.8	504.4	468.0	424.8	376.2	325.6	280.4	244.1
130°	538.2	534.3	524.0	506.3	480.3	446.9	407.1	362.9	318.7	278.9	248.0
132.5°	511.2	508.8	499.9	482.3	458.2	426.8	390.4	350.6	312.3	278.4	250.9
135°	485.7	482.3	473.4	458.7	434.6	406.6	374.7	339.8	306.9	278.0	253.9
137.5°	458.7	455.7	448.4	433.1	412.5	387.5	359.0	329.5	302.0	277.0	255.9
140°	430.2	430.7	422.8	409.1	390.4	369.3	345.7	320.7	297.6	276.5	257.8
142.5°	403.7	404.2	397.3	385.5	370.3	352.6	333.0	312.3	293.7	275.5	259.3
145°	379.6	378.6	374.7	364.4	352.1	337.9	322.2	305.9	290.2	274.5	259.8
147.5°	359.0	358.5	354.6	347.2	337.4	327.1	313.8	300.5	286.8	273.0	259.8
150°	341.3	341.3	338.4	333.0	325.6	316.3	305.9	294.7	283.4	271.1	259.8
152.5°	326.6	326.6	325.1	320.2	314.8	307.4	298.6	289.3	279.4	268.6	258.3
155°	314.8	314.3	313.3	309.4	305.0	299.1	291.7	283.9	275.5	265.7	257.3
157.5°	303.5	303.5	302.5	299.6	295.6	290.7	284.8	278.0	271.1	263.2	255.9
160°	292.7	293.2	293.2	290.2	286.8	283.4	278.4	273.0	266.7	260.3	254.9
162.5°	282.9	283.4	283.4	280.9	278.9	276.0	271.6	267.2	262.2	257.3	252.9
165°	274.5	274.5	275.0	273.0	271.1	268.6	265.2	262.2	258.3	254.4	250.9
167.5°	266.2	266.2	266.7	265.2	264.2	262.2	260.3	257.8	254.4	251.4	249.0
170°	258.8	258.8	259.3	258.3	257.8	256.8	254.9	253.4	250.9	248.5	247.0
172.5°	251.9	252.4	253.4	252.4	252.4	251.9	250.5	249.5	247.5	246.0	245.5
175°	247.0	247.5	248.0	247.5	247.5	247.5	246.5	246.0	245.1	244.1	244.1
177.5°	243.6	243.6	244.6	244.1	244.6	244.6	244.1	243.6	243.1	242.6	243.1
180°	242.6	242.6	242.6	242.6	242.6	242.6	242.6	242.6	242.6	242.6	242.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	2469.3	2469.3	2469.3	2469.3	2469.3	2469.3	2469.3	2469.3	2469.3	2469.3	2469.3
2.5°	2641.1	2634.3	2609.1	2583.8	2555.2	2526.6	2505.4	2484.2	2452.7	2421.1	2395.4
5°	2862.3	2830.2	2776.9	2723.6	2651.5	2579.3	2530.6	2481.9	2416.6	2351.2	2299.1
7.5°	3037.6	2982.6	2908.1	2833.6	2739.1	2644.6	2555.2	2465.8	2366.1	2266.5	2185.1
10°	3149.3	3112.1	3026.1	2940.2	2813.6	2687.0	2562.1	2437.2	2308.8	2180.5	2072.8
12.5°	3160.2	3163.6	3084.6	3005.5	2862.3	2719.1	2567.2	2415.4	2253.8	2092.3	1966.8
15°	3064.5	3123.5	3080.0	3036.5	2892.1	2747.7	2560.9	2374.2	2188.0	2001.8	1856.8
17.5°	2886.9	3013.5	3019.8	3026.1	2881.8	2737.4	2530.6	2323.7	2112.9	1902.1	1749.7
20°	2644.6	2831.3	2895.5	2959.7	2842.2	2724.8	2502.5	2280.2	2044.2	1808.1	1648.3
22.5°	2397.1	2624.0	2741.4	2858.8	2771.8	2684.7	2448.1	2211.5	1962.2	1713.0	1550.9
25°	2115.2	2362.7	2543.2	2723.6	2670.4	2617.1	2383.9	2150.7	1885.5	1620.2	1454.6
27.5°	1869.4	2120.9	2338.6	2556.3	2544.9	2533.4	2302.0	2070.5	1799.0	1527.4	1367.5
30°	1650.6	1884.9	2128.4	2371.9	2399.9	2428.0	2204.6	1981.1	1709.0	1436.9	1282.8
32.5°	1456.9	1661.5	1922.7	2184.0	2239.0	2294.0	2092.3	1890.6	1621.4	1352.1	1203.7
35°	1298.2	1483.9	1745.1	2006.3	2075.1	2143.8	1968.5	1793.2	1530.8	1268.4	1126.9
37.5°	1157.9	1313.1	1568.1	1823.0	1907.2	1991.5	1834.5	1677.5	1431.7	1185.9	1055.9
40°	1041.6	1166.5	1400.8	1635.1	1732.5	1829.9	1700.4	1570.9	1337.8	1104.6	984.8
42.5°	944.2	1055.3	1267.9	1480.4	1573.8	1667.2	1557.8	1448.3	1240.9	1033.5	924.1
45°	861.1	949.9	1143.0	1336.0	1424.8	1513.6	1419.7	1325.7	1143.0	960.2	858.2
47.5°	783.2	859.4	1024.4	1189.4	1268.4	1347.5	1274.2	1200.8	1046.1	891.5	799.2
50°	713.3	774.6	919.0	1063.3	1132.1	1200.8	1136.1	1071.4	944.2	817.0	736.8
52.5°	652.6	702.4	823.3	944.2	1003.2	1062.2	1006.6	951.0	850.2	749.4	679.5
55°	592.4	634.8	739.6	844.5	884.6	924.7	881.7	838.7	757.4	676.0	617.0
57.5°	536.2	574.1	660.0	745.9	776.9	807.8	768.9	729.9	668.6	607.3	558.0
60°	481.2	512.2	583.8	655.4	674.3	693.2	661.7	630.2	587.2	544.3	500.2
62.5°	430.3	458.3	511.6	564.9	577.5	590.1	566.0	542.0	509.3	476.7	442.3
65°	377.6	398.7	442.3	485.8	493.9	501.9	480.7	459.5	434.8	410.2	385.0
67.5°	328.9	343.7	379.3	414.8	415.4	415.9	398.7	381.6	367.8	354.1	334.0
70°	281.3	295.6	319.1	342.6	343.2	343.7	330.0	316.2	305.9	295.6	280.7
72.5°	232.6	242.9	260.7	278.4	277.3	276.1	267.6	259.0	250.9	242.9	232.0
75°	188.5	197.1	209.1	221.1	217.7	214.3	209.7	205.1	198.2	191.4	184.5
77.5°	148.4	153.5	160.4	167.3	165.0	162.7	158.7	154.7	149.5	144.4	141.5
80°	108.9	111.1	115.7	120.3	119.2	118.0	113.4	108.9	107.7	106.6	102.6
82.5°	73.9	76.8	77.9	79.1	78.5	77.9	74.5	71.0	69.9	68.7	68.2
85°	44.1	44.7	45.3	45.8	44.1	42.4	41.2	40.1	40.1	40.1	39.5
87.5°	20.1	20.6	20.6	20.6	20.1	19.5	18.3	17.2	17.8	18.3	18.3
90°	9.3	7.9	6.4	5.4	4.4	2.9	2.0	1.0	2.0	2.9	4.4
92.5°	75.6	49.6	33.9	25.0	20.1	15.7	10.8	7.4	10.8	15.7	20.1
95°	178.8	105.6	63.8	44.7	31.9	23.6	18.2	16.7	18.2	23.6	31.9
97.5°	198.9	113.9	72.7	51.6	38.8	31.4	27.0	26.5	27.0	31.4	38.8
100°	185.1	112.5	78.1	58.9	47.1	40.3	36.8	36.3	36.8	40.3	47.1
102.5°	173.4	114.4	84.5	67.3	57.0	50.6	47.6	46.7	47.6	50.6	57.0
105°	168.9	118.4	91.8	76.6	67.3	61.4	58.4	57.0	58.4	61.4	67.3
107.5°	168.0	124.7	101.2	86.9	78.1	72.2	69.2	67.8	69.2	72.2	78.1
110°	170.4	133.1	111.0	97.2	88.9	83.5	81.0	79.6	81.0	83.5	88.9



TEST NUMBER: P831146

CATALOG NUMBER: S123DIP-S1000D585U935-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	175.3	141.4	121.3	108.0	99.7	94.3	91.8	90.4	91.8	94.3	99.7
115°	180.7	150.8	132.1	118.8	110.5	105.6	102.6	100.7	102.6	105.6	110.5
117.5°	187.6	160.6	141.9	129.6	120.3	115.9	113.4	111.0	113.4	115.9	120.3
120°	195.5	169.9	152.2	140.0	130.6	125.7	123.3	121.8	123.3	125.7	130.6
122.5°	202.8	179.7	162.6	149.3	140.5	135.0	132.6	131.1	132.6	135.0	140.5
125°	210.7	189.1	171.9	158.6	149.3	143.9	140.9	140.0	140.9	143.9	149.3
127.5°	217.1	197.4	180.7	167.5	157.1	151.7	148.3	146.8	148.3	151.7	157.1
130°	223.4	204.8	188.6	175.3	165.0	159.1	154.7	153.2	154.7	159.1	165.0
132.5°	229.3	211.2	195.5	182.7	172.4	165.0	160.1	158.1	160.1	165.0	172.4
135°	234.3	217.6	202.3	189.1	178.8	171.4	166.0	164.0	166.0	171.4	178.8
137.5°	238.2	222.0	207.2	195.0	184.7	176.8	171.4	169.4	171.4	176.8	184.7
140°	241.1	226.4	212.2	199.9	190.1	182.2	177.3	174.8	177.3	182.2	190.1
142.5°	244.1	229.8	216.1	204.8	195.0	188.1	182.7	180.7	182.7	188.1	195.0
145°	246.0	232.8	220.0	208.7	200.4	193.0	188.6	187.1	188.6	193.0	200.4
147.5°	247.5	235.2	223.4	213.6	205.3	198.9	194.5	193.5	194.5	198.9	205.3
150°	248.0	237.7	226.4	217.6	210.7	204.3	200.4	199.9	200.4	204.3	210.7
152.5°	249.0	239.2	229.8	221.5	215.6	210.2	206.3	206.3	206.3	210.2	215.6
155°	249.0	241.1	232.8	225.9	220.5	215.6	212.6	212.6	212.6	215.6	220.5
157.5°	249.5	242.1	235.2	229.8	224.9	220.5	218.0	217.6	218.0	220.5	224.9
160°	249.5	243.6	237.7	232.8	229.3	225.4	223.4	223.4	223.4	225.4	229.3
162.5°	249.0	244.1	239.2	235.2	232.3	229.3	227.9	227.9	227.9	229.3	232.3
165°	248.0	244.6	240.6	237.2	235.2	232.8	231.8	232.3	231.8	232.8	235.2
167.5°	247.5	244.6	241.6	239.2	237.7	235.7	235.2	235.7	235.2	235.7	237.7
170°	246.0	244.1	241.6	240.6	239.7	238.2	237.7	238.7	237.7	238.2	239.7
172.5°	245.5	244.1	242.1	241.6	241.1	240.1	240.1	240.6	240.1	240.1	241.1
175°	244.6	243.6	242.6	242.1	242.1	241.1	241.6	242.1	241.6	241.1	242.1
177.5°	244.1	243.1	242.6	242.6	242.6	242.1	242.6	243.1	242.6	242.1	242.6
180°	242.6	242.6	242.6	242.6	242.6	242.6	242.6	242.6	242.6	242.6	242.6



TEST NUMBER: P831146

CATALOG NUMBER: S123DIP-S1000D585U935-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	2469.3	2469.3	2469.3	2469.3	2469.3	2469.3	2469.3	2469.3	2469.3	2469.3	2469.3
2.5°	2369.6	2347.2	2324.9	2307.7	2290.5	2261.3	2232.1	2225.2	2218.3	2208.6	2198.8
5°	2247.0	2192.0	2137.0	2087.7	2038.4	2000.0	1961.7	1936.5	1911.2	1892.9	1874.6
7.5°	2103.7	2021.2	1938.7	1880.3	1821.9	1766.3	1710.7	1693.0	1675.2	1651.1	1627.1
10°	1965.1	1874.0	1782.9	1706.7	1630.5	1576.1	1521.7	1499.9	1478.1	1447.8	1417.4
12.5°	1841.4	1741.7	1642.0	1565.2	1488.4	1435.7	1383.0	1351.5	1320.0	1302.8	1285.6
15°	1711.9	1605.3	1498.7	1427.7	1356.7	1309.1	1261.6	1234.1	1206.6	1189.9	1173.3
17.5°	1597.3	1491.9	1386.5	1318.3	1250.1	1206.6	1163.0	1139.0	1114.9	1102.3	1089.7
20°	1488.4	1385.3	1282.2	1215.7	1149.3	1113.7	1078.2	1062.8	1047.3	1037.0	1026.7
22.5°	1388.7	1287.3	1185.9	1129.2	1072.5	1043.9	1015.2	1004.3	993.4	984.8	976.2
25°	1289.1	1198.5	1108.0	1059.9	1011.8	988.3	964.8	953.9	943.0	934.4	925.8
27.5°	1207.7	1121.2	1034.7	993.4	952.2	933.9	915.5	906.9	898.3	890.3	882.3
30°	1128.6	1051.3	974.0	938.4	902.9	886.3	869.7	861.1	852.5	845.1	837.6
32.5°	1055.3	988.9	922.4	889.7	857.1	843.3	829.6	819.3	809.0	803.2	797.5
35°	985.4	925.8	866.2	839.3	812.4	798.6	784.9	776.3	767.7	763.1	758.5
37.5°	925.8	872.6	819.3	793.5	767.7	754.5	741.4	733.9	726.5	724.7	723.0
40°	865.1	819.3	773.4	748.2	723.0	711.6	700.1	695.5	690.9	689.8	688.6
42.5°	814.7	770.0	725.3	702.4	679.5	669.7	660.0	657.7	655.4	657.1	658.9
45°	756.2	719.0	681.8	660.6	639.4	631.4	623.3	621.6	619.9	623.3	626.8
47.5°	707.0	672.6	638.2	618.2	598.1	592.4	586.7	586.1	585.5	590.1	594.7
50°	656.6	623.3	590.1	574.1	558.0	552.9	547.7	549.4	551.1	558.6	566.0
52.5°	609.6	578.6	547.7	532.8	517.9	514.5	511.0	515.1	519.1	527.1	535.1
55°	558.0	529.9	501.9	490.4	479.0	475.5	472.1	480.1	488.1	495.6	503.0
57.5°	508.7	484.1	459.5	449.2	438.9	438.3	437.7	445.2	452.6	460.6	468.6
60°	456.0	435.4	414.8	406.8	398.7	399.9	401.0	409.6	418.2	424.5	430.8
62.5°	407.9	390.7	373.5	366.1	358.6	361.5	364.4	373.0	381.6	389.0	396.5
65°	359.8	345.5	331.1	326.0	320.8	324.8	328.9	336.3	343.7	348.9	354.1
67.5°	314.0	301.9	289.9	285.9	281.9	285.9	289.9	297.3	304.8	309.9	315.1
70°	265.8	256.1	246.4	243.5	240.6	245.2	249.8	256.1	262.4	267.6	272.7
72.5°	221.1	213.7	206.2	205.7	205.1	209.1	213.1	219.4	225.7	229.2	232.6
75°	177.6	173.6	169.6	169.0	168.4	172.4	176.5	179.9	183.3	186.2	189.1
77.5°	138.6	135.2	131.8	132.3	132.9	135.8	138.6	142.1	145.5	147.2	149.0
80°	98.5	97.4	96.2	97.4	98.5	100.8	103.1	105.4	107.7	108.9	110.0
82.5°	67.6	66.5	65.3	67.0	68.7	70.5	72.2	73.9	75.6	76.2	76.8
85°	39.0	40.7	42.4	42.4	42.4	43.0	43.5	44.1	44.7	44.1	43.5
87.5°	18.3	18.9	19.5	19.5	19.5	20.1	20.6	20.6	20.6	20.1	19.5
90°	5.4	6.4	7.9	9.3	10.8	12.3	11.8	12.3	12.8	13.3	14.2
92.5°	25.0	33.9	49.6	75.6	101.2	91.3	68.3	48.6	37.8	32.9	29.5
95°	44.7	63.8	105.6	178.8	259.3	291.2	236.2	176.8	119.8	93.8	76.1
97.5°	51.6	72.7	113.9	198.9	334.4	447.9	463.1	406.1	306.4	241.6	185.6
100°	58.9	78.1	112.5	185.1	314.3	465.1	561.8	579.0	539.2	481.8	412.0
102.5°	67.3	84.5	114.4	173.4	284.8	433.1	566.7	636.5	644.8	617.3	579.5
105°	76.6	91.8	118.4	168.9	261.8	394.8	535.8	638.4	687.5	696.9	684.1
107.5°	86.9	101.2	124.7	168.0	245.1	361.0	491.6	609.0	686.1	724.4	737.6
110°	97.2	111.0	133.1	170.4	236.2	333.0	450.3	562.8	653.2	715.0	749.4



TEST NUMBER: P831146

CATALOG NUMBER: S123DIP-S1000D585U935-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	108.0	121.3	141.4	175.3	231.3	314.3	414.5	517.1	609.9	681.1	727.8
115°	118.8	132.1	150.8	180.7	230.8	302.0	387.0	477.8	563.3	635.5	689.0
117.5°	129.6	141.9	160.6	187.6	231.3	293.7	368.8	447.4	523.0	589.3	644.8
120°	140.0	152.2	169.9	195.5	233.3	288.3	355.1	424.3	490.6	549.5	599.1
122.5°	149.3	162.6	179.7	202.8	236.7	284.8	343.8	406.1	464.6	518.1	563.3
125°	158.6	171.9	189.1	210.7	240.1	281.9	334.4	390.4	443.9	491.1	530.4
127.5°	167.5	180.7	197.4	217.1	244.1	280.4	325.6	376.2	424.8	468.0	504.4
130°	175.3	188.6	204.8	223.4	248.0	278.9	318.7	362.9	407.1	446.9	480.3
132.5°	182.7	195.5	211.2	229.3	250.9	278.4	312.3	350.6	390.4	426.8	458.2
135°	189.1	202.3	217.6	234.3	253.9	278.0	306.9	339.8	374.7	406.6	434.6
137.5°	195.0	207.2	222.0	238.2	255.9	277.0	302.0	329.5	359.0	387.5	412.5
140°	199.9	212.2	226.4	241.1	257.8	276.5	297.6	320.7	345.7	369.3	390.4
142.5°	204.8	216.1	229.8	244.1	259.3	275.5	293.7	312.3	333.0	352.6	370.3
145°	208.7	220.0	232.8	246.0	259.8	274.5	290.2	305.9	322.2	337.9	352.1
147.5°	213.6	223.4	235.2	247.5	259.8	273.0	286.8	300.5	313.8	327.1	337.4
150°	217.6	226.4	237.7	248.0	259.8	271.1	283.4	294.7	305.9	316.3	325.6
152.5°	221.5	229.8	239.2	249.0	258.3	268.6	279.4	289.3	298.6	307.4	314.8
155°	225.9	232.8	241.1	249.0	257.3	265.7	275.5	283.9	291.7	299.1	305.0
157.5°	229.8	235.2	242.1	249.5	255.9	263.2	271.1	278.0	284.8	290.7	295.6
160°	232.8	237.7	243.6	249.5	254.9	260.3	266.7	273.0	278.4	283.4	286.8
162.5°	235.2	239.2	244.1	249.0	252.9	257.3	262.2	267.2	271.6	276.0	278.9
165°	237.2	240.6	244.6	248.0	250.9	254.4	258.3	262.2	265.2	268.6	271.1
167.5°	239.2	241.6	244.6	247.5	249.0	251.4	254.4	257.8	260.3	262.2	264.2
170°	240.6	241.6	244.1	246.0	247.0	248.5	250.9	253.4	254.9	256.8	257.8
172.5°	241.6	242.1	244.1	245.5	245.5	246.0	247.5	249.5	250.5	251.9	252.4
175°	242.1	242.6	243.6	244.6	244.1	244.1	245.1	246.0	246.5	247.5	247.5
177.5°	242.6	242.6	243.1	244.1	243.1	242.6	243.1	243.6	244.1	244.6	244.6
180°	242.6	242.6	242.6	242.6	242.6	242.6	242.6	242.6	242.6	242.6	242.6



TEST NUMBER: P831146

CATALOG NUMBER: S123DIP-S1000D585U935-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	2469.3	2469.3	2469.3	2469.3
2.5°	2194.8	2190.8	2174.8	2158.7
5°	1860.8	1847.1	1842.5	1837.9
7.5°	1625.9	1624.8	1600.7	1576.7
10°	1419.1	1420.8	1399.1	1377.3
12.5°	1271.3	1257.0	1255.3	1253.5
15°	1160.2	1147.0	1144.7	1142.4
17.5°	1081.7	1073.6	1071.4	1069.1
20°	1022.1	1017.5	1013.5	1009.5
22.5°	970.5	964.8	961.4	957.9
25°	920.7	915.5	914.4	913.2
27.5°	876.0	869.7	869.7	869.7
30°	833.6	829.6	827.9	826.1
32.5°	794.1	790.6	790.6	790.6
35°	756.8	755.1	752.8	750.5
37.5°	723.0	723.0	721.9	720.7
40°	690.4	692.1	692.1	692.1
42.5°	660.6	662.3	662.3	662.3
45°	629.6	632.5	633.6	634.8
47.5°	599.3	603.9	605.0	606.1
50°	569.5	572.9	573.5	574.1
52.5°	539.1	543.1	546.0	548.9
55°	507.0	511.0	512.8	514.5
57.5°	472.7	476.7	477.2	477.8
60°	434.8	438.9	440.0	441.1
62.5°	398.7	401.0	402.2	403.3
65°	357.5	360.9	363.2	365.5
67.5°	318.0	320.8	320.8	320.8
70°	273.9	275.0	276.7	278.4
72.5°	233.2	233.7	233.7	233.7
75°	190.2	191.4	191.9	192.5
77.5°	149.5	150.1	150.1	150.1
80°	109.4	108.9	108.9	108.9
82.5°	75.1	73.3	73.3	73.3
85°	43.0	42.4	43.0	43.5
87.5°	19.5	19.5	19.5	19.5
90°	13.8	14.2	14.7	14.2
92.5°	28.5	26.5	27.0	26.0
95°	66.8	62.4	58.9	57.0
97.5°	152.7	134.1	122.3	116.9
100°	362.4	326.6	307.4	307.9
102.5°	543.6	517.1	501.9	487.7
105°	661.5	642.8	627.1	624.7
107.5°	734.7	725.8	719.4	714.0
110°	763.2	767.1	766.1	765.1



TEST NUMBER: P831146

CATALOG NUMBER: S123DIP-S1000D585U935-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
112.5°	755.8	770.0	774.9	775.4
115°	725.8	747.4	757.3	759.7
117.5°	683.1	707.2	721.9	725.3
120°	637.9	665.4	677.2	680.2
122.5°	596.7	620.7	634.0	637.9
125°	561.8	583.4	595.7	599.1
127.5°	532.8	551.5	562.8	565.7
130°	506.3	524.0	534.3	538.2
132.5°	482.3	499.9	508.8	511.2
135°	458.7	473.4	482.3	485.7
137.5°	433.1	448.4	455.7	458.7
140°	409.1	422.8	430.7	430.2
142.5°	385.5	397.3	404.2	403.7
145°	364.4	374.7	378.6	379.6
147.5°	347.2	354.6	358.5	359.0
150°	333.0	338.4	341.3	341.3
152.5°	320.2	325.1	326.6	326.6
155°	309.4	313.3	314.3	314.8
157.5°	299.6	302.5	303.5	303.5
160°	290.2	293.2	293.2	292.7
162.5°	280.9	283.4	283.4	282.9
165°	273.0	275.0	274.5	274.5
167.5°	265.2	266.7	266.2	266.2
170°	258.3	259.3	258.8	258.8
172.5°	252.4	253.4	252.4	251.9
175°	247.5	248.0	247.5	247.0
177.5°	244.1	244.6	243.6	243.6
180°	242.6	242.6	242.6	242.6



TEST NUMBER: P831146

CATALOG NUMBER: S123DIP-S1000D585U935-4F0-1E-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	16.54	17.54	17.33	18.35	19.33	18.78	19.78	19.57	20.59	21.57
	3H	18.20	19.10	19.00	19.91	20.93	20.21	21.11	21.02	21.93	22.94
	4H	18.78	19.63	19.60	20.45	21.48	20.67	21.52	21.49	22.34	23.36
	6H	19.16	19.94	19.99	20.77	21.81	20.95	21.73	21.79	22.56	23.60
	8H	19.26	20.00	20.10	20.85	21.89	21.02	21.76	21.86	22.61	23.65
	12H	19.31	20.02	20.16	20.86	21.92	21.04	21.75	21.89	22.59	23.66
4H	2H	17.14	17.98	17.96	18.80	19.83	18.96	19.81	19.78	20.63	21.65
	3H	18.98	19.68	19.81	20.54	21.58	20.59	21.29	21.42	22.15	23.19
	4H	19.68	20.32	20.53	21.17	22.24	21.18	21.82	22.03	22.67	23.74
	6H	20.16	20.71	21.03	21.59	22.66	21.59	22.14	22.46	23.02	24.09
	8H	20.30	20.82	21.17	21.69	22.77	21.71	22.22	22.57	23.10	24.18
	12H	20.37	20.84	21.26	21.73	22.82	21.76	22.22	22.64	23.11	24.20
8H	4H	19.96	20.47	20.82	21.34	22.43	21.30	21.81	22.16	22.68	23.77
	6H	20.55	20.97	21.44	21.89	22.97	21.80	22.23	22.70	23.14	24.23
	8H	20.76	21.13	21.66	22.04	23.15	21.98	22.36	22.89	23.27	24.37
	12H	20.89	21.22	21.79	22.12	23.27	22.09	22.42	23.00	23.32	24.48
12H	4H	19.96	20.43	20.85	21.32	22.41	21.28	21.74	22.16	22.63	23.72
	6H	20.60	20.98	21.50	21.89	22.99	21.82	22.20	22.72	23.10	24.21
	8H	20.84	21.17	21.75	22.07	23.23	22.02	22.36	22.93	23.26	24.41