

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: P831131

Luminaire Tested: S123DIP-S1000D585U835-4F0-1E-UDD-G4

Issue Date: 05/03/2024

Test Information

Test Method: LM-79-2019
Report Number: P831131
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-S1000D585U835-4F0-1E-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

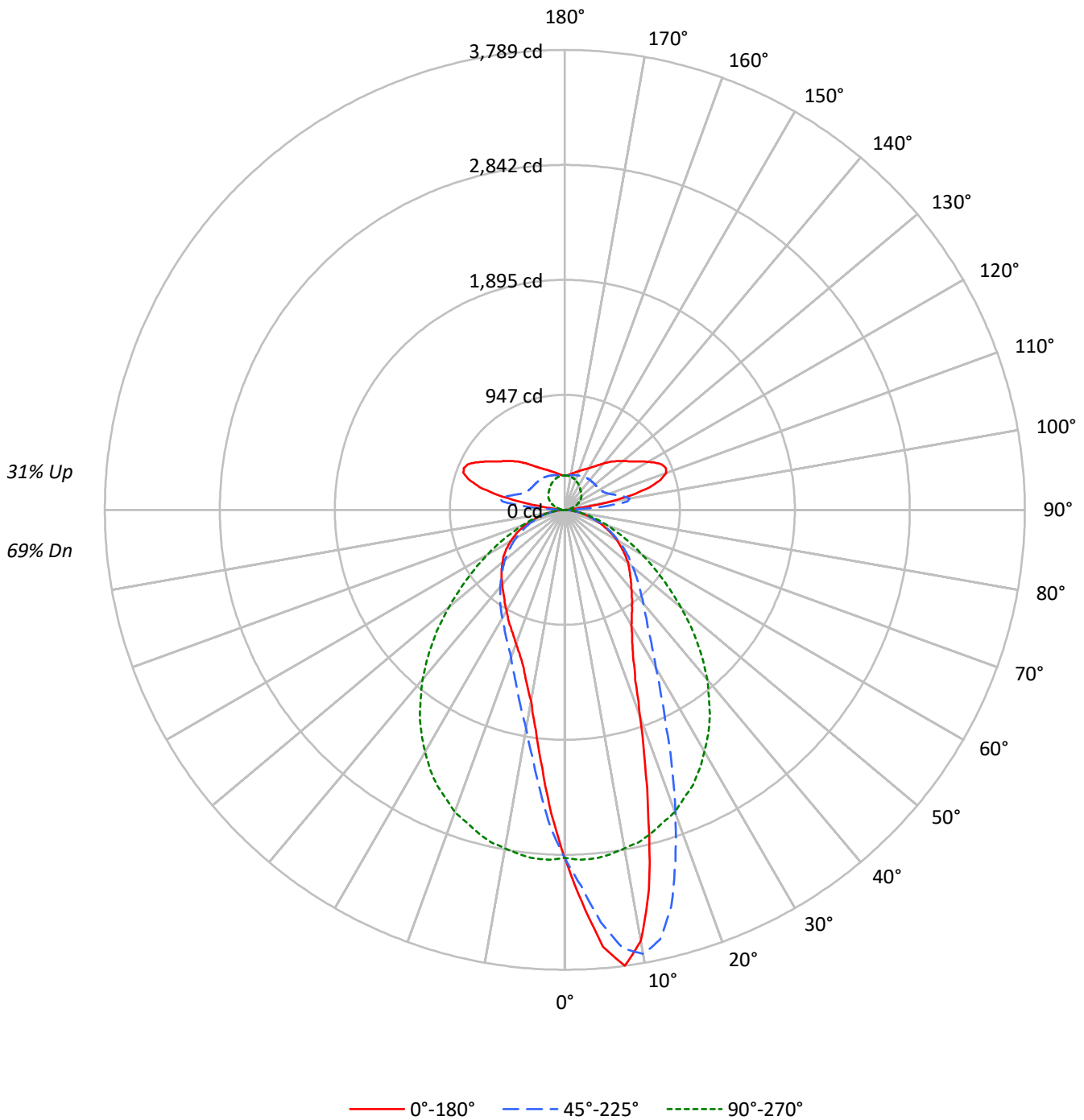
Lumens per Lamp: N/A
Luminaire Lumens: 6731.2 lumens
Efficiency: N/A
Efficacy: 133.8 lumens/watt
Spacing Criteria (0/90/45): 0.65 / 1.19 / 0.89
Luminous Opening: Rectangular (W 4' x L: 0.25' x H: 0')
CIE Type: Semi-Direct

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°	30870	30870	30870	30870	30870
5°	39041	36847	31147	25099	23064
10°	39419	40611	30938	20007	17484
15°	29690	37706	30729	16944	14785
20°	20686	30511	30336	14818	13431
25°	15775	23464	29667	13632	12598
30°	13646	18641	28599	12795	11926
35°	12661	15738	27367	12189	11454
40°	11987	14119	25638	11612	11294
45°	11587	13067	23440	11163	11224
50°	11387	12234	20837	10752	11164
55°	10963	11626	18282	10365	11213
60°	10572	10973	15756	10000	11031
65°	9931	10356	13593	9610	10812
70°	9171	9571	11560	8963	10178
75°	8301	8580	9906	8330	9299
80°	6850	7507	7835	7259	7835
85°	5422	6076	5755	6163	6249

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 80°
 Vertical Angle: 45°
 Luminance: 26761 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	271.1	4.0
10°-20°	674.5	10.0
20°-30°	798.7	11.9
30°-40°	803.0	11.9
40°-50°	736.8	10.9
50°-60°	608.1	9.0
60°-70°	430.2	6.4
70°-80°	229.6	3.4
80°-90°	59.8	0.9
90°-100°	152.9	2.3
100°-110°	447.6	6.7
110°-120°	437.1	6.5
120°-130°	348.1	5.2
130°-140°	274.7	4.1
140°-150°	204.9	3.0
150°-160°	142.9	2.1
160°-170°	83.9	1.2
170°-180°	27.3	0.4
0°-30°	1744.3	25.9
0°-40°	2547.3	37.8
0°-60°	3892.2	57.8
0°-90°	4611.8	68.5
90°-120°	1037.7	15.4
90°-150°	1865.4	27.7
90°-180°	2119.0	31.5
0°-180°	6731.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2868	2868	2868	2868	2868	
5°	3613	3410	2883	2323	2135	344
15°	2664	3384	2758	1520	1327	736
25°	1328	1976	2498	1148	1061	627
35°	964	1198	2083	928	872	605
45°	761	858	1540	733	737	590
55°	584	620	974	552	598	523
65°	390	407	534	377	424	387
75°	200	206	238	200	224	210
85°	44	49	47	50	51	49
90°	16	14	1	14	16	12
95°	66	338	19	338	66	108
105°	726	459	66	459	726	724
115°	882	351	117	351	882	860
125°	696	327	163	327	696	630
135°	564	323	190	323	564	438
145°	441	319	217	319	441	280
155°	366	309	247	309	366	170
165°	319	296	270	296	319	91
175°	287	284	281	284	287	28
180°	282	282	282	282	282	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	2867.9	2867.9	2867.9	2867.9	2867.9	2867.9	2867.9	2867.9	2867.9	2867.9	2867.9
2.5°	3232.6	3229.2	3225.9	3209.3	3192.6	3184.6	3176.7	3152.7	3128.8	3102.1	3075.5
5°	3613.2	3622.5	3631.8	3621.2	3610.5	3577.9	3545.3	3502.0	3458.8	3410.2	3361.6
7.5°	3788.8	3794.2	3799.5	3792.8	3786.2	3777.5	3768.9	3730.3	3691.7	3641.8	3591.9
10°	3606.5	3618.5	3630.5	3656.4	3682.4	3711.6	3740.9	3735.6	3730.3	3715.6	3701.0
12.5°	3205.9	3220.6	3235.2	3287.1	3339.0	3405.6	3472.1	3529.3	3586.6	3626.5	3666.4
15°	2664.3	2704.9	2745.5	2792.7	2840.0	2937.8	3035.6	3156.0	3276.5	3383.6	3490.7
17.5°	2194.5	2209.8	2225.1	2275.7	2326.3	2449.4	2572.5	2711.5	2850.6	3028.3	3205.9
20°	1805.9	1819.9	1833.9	1900.4	1966.9	2063.4	2159.9	2316.3	2472.7	2663.6	2854.6
22.5°	1517.1	1539.1	1561.0	1598.3	1635.6	1728.1	1820.6	1959.6	2098.7	2309.6	2520.6
25°	1328.2	1344.1	1360.1	1382.7	1405.3	1479.2	1553.1	1667.5	1782.0	1975.6	2169.2
27.5°	1199.1	1205.7	1212.4	1235.0	1257.6	1305.5	1353.4	1451.9	1550.4	1714.8	1879.1
30°	1097.9	1102.6	1107.2	1127.2	1147.2	1179.8	1212.4	1283.6	1354.8	1499.8	1644.9
32.5°	1027.4	1030.7	1034.0	1049.3	1064.7	1087.9	1111.2	1163.1	1215.0	1334.8	1454.6
35°	963.5	965.5	967.5	978.8	990.1	1007.4	1024.7	1064.0	1103.2	1197.7	1292.2
37.5°	907.6	910.3	912.9	919.6	926.2	941.6	956.9	988.1	1019.4	1091.9	1164.5
40°	853.1	857.7	862.4	867.0	871.7	884.3	897.0	920.9	944.9	1004.8	1064.7
42.5°	806.5	811.1	815.8	817.8	819.8	827.1	834.4	856.4	878.3	922.9	967.5
45°	761.2	763.2	765.2	767.2	769.2	775.2	781.2	800.5	819.8	858.4	897.0
47.5°	720.0	720.0	720.0	721.3	722.6	728.0	733.3	747.3	761.2	791.2	821.1
50°	680.0	680.0	680.0	678.1	676.1	679.4	682.7	693.4	704.0	730.6	757.2
52.5°	632.1	632.1	632.1	632.8	633.5	633.5	633.5	642.8	652.1	676.1	700.0
55°	584.2	586.9	589.6	587.6	585.6	586.9	588.2	594.2	600.2	619.5	638.8
57.5°	536.3	537.7	539.0	538.3	537.7	538.3	539.0	544.3	549.6	564.3	578.9
60°	491.1	491.1	491.1	489.7	488.4	489.7	491.1	493.7	496.4	509.7	523.0
62.5°	440.5	441.2	441.8	442.5	443.2	441.8	440.5	443.8	447.2	457.1	467.1
65°	389.9	390.6	391.3	393.3	395.3	393.9	392.6	395.9	399.2	406.6	413.9
67.5°	344.7	343.4	342.0	342.7	343.4	345.3	347.3	348.0	348.7	356.7	364.6
70°	291.4	292.8	294.1	293.4	292.8	293.4	294.1	296.1	298.1	304.1	310.1
72.5°	243.5	244.2	244.9	244.9	244.9	246.2	247.5	249.5	251.5	254.9	258.2
75°	199.6	199.6	199.6	201.0	202.3	202.9	203.6	203.6	203.6	206.3	208.9
77.5°	151.7	155.0	158.4	157.7	157.0	158.4	159.7	161.7	163.7	165.0	166.4
80°	110.5	110.5	110.5	111.1	111.8	113.8	115.8	117.1	118.4	121.1	123.8
82.5°	70.5	71.2	71.9	73.9	75.9	77.2	78.5	80.5	82.5	82.5	82.5
85°	43.9	42.6	41.3	42.6	43.9	45.2	46.6	47.2	47.9	49.2	50.6
87.5°	21.3	21.3	21.3	21.3	21.3	22.0	22.6	22.6	22.6	22.6	22.6
90°	16.5	17.1	16.5	16.0	16.5	15.4	14.8	14.3	13.7	14.3	12.5
92.5°	30.2	31.4	30.8	33.1	34.2	38.2	43.9	56.5	79.3	106.1	117.5
95°	66.2	68.4	72.4	77.6	88.4	108.9	139.2	205.3	274.3	338.2	301.2
97.5°	135.7	142.0	155.7	177.4	215.6	280.6	355.9	471.7	537.9	520.2	388.4
100°	357.6	357.1	379.3	420.9	478.5	559.5	626.3	672.5	652.5	540.1	365.0
102.5°	566.4	582.9	600.6	631.4	673.0	717.0	748.9	739.2	658.2	503.1	330.8
105°	725.5	728.4	746.6	768.3	794.5	809.4	798.5	741.5	622.3	458.6	304.0
107.5°	829.3	835.6	843.0	853.3	856.7	841.3	796.8	707.3	570.9	419.2	284.6
110°	888.6	889.8	890.9	886.4	870.4	830.5	758.6	653.6	523.0	386.7	274.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	900.6	900.1	894.3	877.8	845.3	791.1	708.4	600.6	481.4	365.0	268.6
115°	882.4	879.5	868.1	843.0	800.2	738.1	654.2	555.0	449.5	350.8	268.1
117.5°	842.4	838.4	821.3	793.4	748.9	684.4	607.4	519.6	428.4	341.1	268.6
120°	790.0	786.5	772.9	740.9	695.9	638.2	569.8	492.8	412.4	334.8	270.9
122.5°	740.9	736.4	721.0	693.0	654.2	601.7	539.6	471.7	399.3	330.8	274.9
125°	695.9	691.9	677.6	652.5	616.0	570.4	515.6	453.4	388.4	327.4	278.9
127.5°	657.1	653.6	640.5	618.9	585.8	543.6	493.4	436.9	378.2	325.7	283.5
130°	625.1	620.6	608.6	588.1	557.8	519.0	472.8	421.5	370.2	324.0	288.0
132.5°	593.8	590.9	580.6	560.1	532.2	495.7	453.4	407.2	362.8	323.4	291.5
135°	564.1	560.1	549.8	532.7	504.8	472.3	435.2	394.7	356.5	322.8	294.9
137.5°	532.7	529.3	520.8	503.1	479.1	450.0	416.9	382.7	350.8	321.7	297.2
140°	499.6	500.2	491.1	475.1	453.4	428.9	401.5	372.5	345.6	321.1	299.4
142.5°	468.8	469.4	461.4	447.7	430.1	409.5	386.7	362.8	341.1	320.0	301.2
145°	440.9	439.8	435.2	423.2	409.0	392.4	374.2	355.3	337.1	318.8	301.7
147.5°	416.9	416.4	411.8	403.3	391.8	379.9	364.5	349.1	333.1	317.1	301.7
150°	396.4	396.4	393.0	386.7	378.2	367.3	355.3	342.2	329.1	314.8	301.7
152.5°	379.3	379.3	377.6	371.9	365.6	357.1	346.8	336.0	324.5	312.0	300.0
155°	365.6	365.0	363.9	359.3	354.2	347.4	338.8	329.7	320.0	308.6	298.9
157.5°	352.5	352.5	351.4	347.9	343.4	337.7	330.8	322.8	314.8	305.7	297.2
160°	339.9	340.5	340.5	337.1	333.1	329.1	323.4	317.1	309.7	302.3	296.0
162.5°	328.5	329.1	329.1	326.3	324.0	320.6	315.4	310.3	304.6	298.9	293.7
165°	318.8	318.8	319.4	317.1	314.8	312.0	308.0	304.6	300.0	295.5	291.5
167.5°	309.1	309.1	309.7	308.0	306.9	304.6	302.3	299.4	295.5	292.0	289.2
170°	300.6	300.6	301.2	300.0	299.4	298.3	296.0	294.3	291.5	288.6	286.9
172.5°	292.6	293.2	294.3	293.2	293.2	292.6	290.9	289.8	287.5	285.8	285.2
175°	286.9	287.5	288.0	287.5	287.5	287.5	286.3	285.8	284.6	283.5	283.5
177.5°	282.9	282.9	284.0	283.5	284.0	284.0	283.5	282.9	282.3	281.8	282.3
180°	281.8	281.8	281.8	281.8	281.8	281.8	281.8	281.8	281.8	281.8	281.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	2867.9	2867.9	2867.9	2867.9	2867.9	2867.9	2867.9	2867.9	2867.9	2867.9	2867.9
2.5°	3067.5	3059.5	3030.3	3001.0	2967.7	2934.5	2909.8	2885.2	2848.6	2812.0	2782.1
5°	3324.4	3287.1	3225.2	3163.4	3079.5	2995.7	2939.1	2882.6	2806.7	2730.8	2670.3
7.5°	3528.0	3464.1	3377.6	3291.1	3181.3	3071.5	2967.7	2863.9	2748.1	2632.4	2537.9
10°	3657.8	3614.5	3514.7	3414.9	3267.8	3120.8	2975.7	2830.6	2681.6	2532.5	2407.4
12.5°	3670.4	3674.4	3582.6	3490.7	3324.4	3158.0	2981.7	2805.4	2617.7	2430.1	2284.3
15°	3559.3	3627.8	3577.2	3526.7	3359.0	3191.3	2974.4	2757.5	2541.2	2324.9	2156.6
17.5°	3353.0	3500.0	3507.4	3514.7	3347.0	3179.3	2939.1	2698.9	2454.0	2209.2	2032.2
20°	3071.5	3288.4	3363.0	3437.5	3301.1	3164.7	2906.5	2648.3	2374.2	2100.0	1914.4
22.5°	2784.1	3047.6	3184.0	3320.4	3219.2	3118.1	2843.3	2568.5	2279.0	1989.6	1801.3
25°	2456.7	2744.1	2953.7	3163.4	3101.5	3039.6	2768.8	2497.9	2189.9	1881.8	1689.5
27.5°	2171.2	2463.3	2716.2	2969.1	2955.7	2942.4	2673.6	2404.8	2089.4	1774.0	1588.3
30°	1917.0	2189.2	2472.0	2754.8	2787.4	2820.0	2560.5	2301.0	1984.9	1668.8	1489.8
32.5°	1692.1	1929.7	2233.1	2536.5	2600.4	2664.3	2430.1	2195.8	1883.1	1570.4	1398.0
35°	1507.8	1723.4	2026.8	2330.3	2410.1	2490.0	2286.3	2082.7	1778.0	1473.2	1308.9
37.5°	1344.8	1525.1	1821.2	2117.3	2215.1	2313.0	2130.6	1948.3	1662.9	1377.4	1226.3
40°	1209.7	1354.8	1626.9	1899.1	2012.2	2125.3	1974.9	1824.6	1553.7	1282.9	1143.8
42.5°	1096.6	1225.7	1472.5	1719.4	1827.9	1936.3	1809.2	1682.2	1441.3	1200.4	1073.3
45°	1000.1	1103.2	1327.5	1551.7	1654.9	1758.0	1648.9	1539.8	1327.5	1115.2	996.8
47.5°	909.6	998.1	1189.8	1381.4	1473.2	1565.0	1479.9	1394.7	1215.0	1035.4	928.2
50°	828.4	899.6	1067.3	1235.0	1314.8	1394.7	1319.5	1244.3	1096.6	948.9	855.7
52.5°	757.9	815.8	956.2	1096.6	1165.1	1233.7	1169.1	1104.6	987.5	870.4	789.2
55°	688.0	737.3	859.0	980.8	1027.4	1074.0	1024.1	974.2	879.7	785.2	716.6
57.5°	622.8	666.7	766.6	866.4	902.3	938.2	893.0	847.7	776.5	705.3	648.1
60°	558.9	594.9	678.1	761.2	783.2	805.1	768.5	731.9	682.0	632.1	580.9
62.5°	499.7	532.3	594.2	656.1	670.7	685.4	657.4	629.5	591.5	553.6	513.7
65°	438.5	463.1	513.7	564.3	573.6	582.9	558.3	533.7	505.0	476.4	447.2
67.5°	381.9	399.2	440.5	481.8	482.4	483.1	463.1	443.2	427.2	411.2	387.9
70°	326.7	343.4	370.6	397.9	398.6	399.2	383.3	367.3	355.3	343.4	326.1
72.5°	270.2	282.1	302.8	323.4	322.1	320.7	310.7	300.8	291.4	282.1	269.5
75°	218.9	228.9	242.9	256.8	252.9	248.9	243.5	238.2	230.2	222.2	214.3
77.5°	172.3	178.3	186.3	194.3	191.6	189.0	184.3	179.7	173.7	167.7	164.4
80°	126.4	129.1	134.4	139.7	138.4	137.1	131.8	126.4	125.1	123.8	119.1
82.5°	85.8	89.2	90.5	91.8	91.2	90.5	86.5	82.5	81.2	79.8	79.2
85°	51.2	51.9	52.6	53.2	51.2	49.2	47.9	46.6	46.6	46.6	45.9
87.5°	23.3	24.0	24.0	24.0	23.3	22.6	21.3	20.0	20.6	21.3	21.3
90°	10.8	9.1	7.4	6.3	5.1	3.4	2.3	1.1	2.3	3.4	5.1
92.5°	87.8	57.6	39.4	29.1	23.4	18.3	12.5	8.6	12.5	18.3	23.4
95°	207.6	122.6	74.1	51.9	37.1	27.4	21.1	19.4	21.1	27.4	37.1
97.5°	231.0	132.3	84.4	59.9	45.1	36.5	31.4	30.8	31.4	36.5	45.1
100°	215.0	130.6	90.7	68.4	54.8	46.8	42.8	42.2	42.8	46.8	54.8
102.5°	201.3	132.9	98.1	78.1	66.2	58.7	55.3	54.2	55.3	58.7	66.2
105°	196.2	137.5	106.7	89.0	78.1	71.3	67.9	66.2	67.9	71.3	78.1
107.5°	195.1	144.9	117.5	101.0	90.7	83.8	80.4	78.7	80.4	83.8	90.7
110°	197.9	154.6	128.9	112.9	103.2	97.0	94.1	92.4	94.1	97.0	103.2



TEST NUMBER: P831131

CATALOG NUMBER: S123DIP-S1000D585U835-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	203.6	164.3	140.9	125.5	115.8	109.5	106.7	104.9	106.7	109.5	115.8
115°	209.9	175.1	153.4	138.0	128.3	122.6	119.2	116.9	119.2	122.6	128.3
117.5°	217.9	186.5	164.8	150.6	139.7	134.6	131.8	128.9	131.8	134.6	139.7
120°	227.0	197.3	176.8	162.6	151.7	146.0	143.2	141.5	143.2	146.0	151.7
122.5°	235.6	208.8	188.8	173.4	163.1	156.9	154.0	152.3	154.0	156.9	163.1
125°	244.7	219.6	199.6	184.2	173.4	167.1	163.7	162.6	163.7	167.1	173.4
127.5°	252.1	229.3	209.9	194.5	182.5	176.2	172.3	170.5	172.3	176.2	182.5
130°	259.5	237.8	219.0	203.6	191.6	184.8	179.7	178.0	179.7	184.8	191.6
132.5°	266.4	245.3	227.0	212.2	200.2	191.6	185.9	183.7	185.9	191.6	200.2
135°	272.1	252.7	235.0	219.6	207.6	199.1	192.8	190.5	192.8	199.1	207.6
137.5°	276.6	257.8	240.7	226.4	214.5	205.3	199.1	196.8	199.1	205.3	214.5
140°	280.1	262.9	246.4	232.1	220.7	211.6	205.9	203.1	205.9	211.6	220.7
142.5°	283.5	266.9	251.0	237.8	226.4	218.5	212.2	209.9	212.2	218.5	226.4
145°	285.8	270.4	255.5	242.4	232.7	224.2	219.0	217.3	219.0	224.2	232.7
147.5°	287.5	273.2	259.5	248.1	238.4	231.0	225.9	224.7	225.9	231.0	238.4
150°	288.0	276.1	262.9	252.7	244.7	237.3	232.7	232.1	232.7	237.3	244.7
152.5°	289.2	277.8	266.9	257.2	250.4	244.1	239.6	239.6	239.6	244.1	250.4
155°	289.2	280.1	270.4	262.4	256.1	250.4	247.0	247.0	247.0	250.4	256.1
157.5°	289.8	281.2	273.2	266.9	261.2	256.1	253.2	252.7	253.2	256.1	261.2
160°	289.8	282.9	276.1	270.4	266.4	261.8	259.5	259.5	259.5	261.8	266.4
162.5°	289.2	283.5	277.8	273.2	269.8	266.4	264.7	264.7	264.7	266.4	269.8
165°	288.0	284.0	279.5	275.5	273.2	270.4	269.2	269.8	269.2	270.4	273.2
167.5°	287.5	284.0	280.6	277.8	276.1	273.8	273.2	273.8	273.2	273.8	276.1
170°	285.8	283.5	280.6	279.5	278.3	276.6	276.1	277.2	276.1	276.6	278.3
172.5°	285.2	283.5	281.2	280.6	280.1	278.9	278.9	279.5	278.9	278.9	280.1
175°	284.0	282.9	281.8	281.2	281.2	280.1	280.6	281.2	280.6	280.1	281.2
177.5°	283.5	282.3	281.8	281.8	281.8	281.2	281.8	282.3	281.8	281.2	281.8
180°	281.8	281.8	281.8	281.8	281.8	281.8	281.8	281.8	281.8	281.8	281.8



TEST NUMBER: P831131

CATALOG NUMBER: S123DIP-S1000D585U835-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	2867.9	2867.9	2867.9	2867.9	2867.9	2867.9	2867.9	2867.9	2867.9	2867.9	2867.9
2.5°	2752.1	2726.2	2700.2	2680.3	2660.3	2626.4	2592.4	2584.4	2576.5	2565.2	2553.8
5°	2609.7	2545.9	2482.0	2424.7	2367.5	2322.9	2278.4	2249.1	2219.8	2198.5	2177.2
7.5°	2443.4	2347.6	2251.7	2183.9	2116.0	2051.5	1986.9	1966.3	1945.7	1917.7	1889.8
10°	2282.4	2176.6	2070.8	1982.3	1893.8	1830.5	1767.3	1742.0	1716.8	1681.5	1646.2
12.5°	2138.6	2022.8	1907.1	1817.9	1728.7	1667.5	1606.3	1569.7	1533.1	1513.1	1493.2
15°	1988.2	1864.5	1740.7	1658.2	1575.7	1520.5	1465.2	1433.3	1401.4	1382.1	1362.8
17.5°	1855.2	1732.7	1610.3	1531.1	1451.9	1401.4	1350.8	1322.8	1294.9	1280.2	1265.6
20°	1728.7	1609.0	1489.2	1412.0	1334.8	1293.6	1252.3	1234.3	1216.4	1204.4	1192.4
22.5°	1613.0	1495.2	1377.4	1311.5	1245.6	1212.4	1179.1	1166.5	1153.8	1143.8	1133.9
25°	1497.2	1392.0	1286.9	1231.0	1175.1	1147.8	1120.5	1107.9	1095.3	1085.3	1075.3
27.5°	1402.7	1302.2	1201.7	1153.8	1105.9	1084.6	1063.3	1053.3	1043.4	1034.0	1024.7
30°	1310.9	1221.0	1131.2	1089.9	1048.7	1029.4	1010.1	1000.1	990.1	981.5	972.8
32.5°	1225.7	1148.5	1071.3	1033.4	995.5	979.5	963.5	951.5	939.6	932.9	926.2
35°	1144.5	1075.3	1006.1	974.8	943.5	927.6	911.6	901.6	891.6	886.3	881.0
37.5°	1075.3	1013.4	951.5	921.6	891.6	876.3	861.0	852.4	843.7	841.7	839.7
40°	1004.8	951.5	898.3	869.0	839.7	826.4	813.1	807.8	802.5	801.2	799.8
42.5°	946.2	894.3	842.4	815.8	789.2	777.9	766.6	763.9	761.2	763.2	765.2
45°	878.3	835.1	791.8	767.2	742.6	733.3	724.0	722.0	720.0	724.0	728.0
47.5°	821.1	781.2	741.3	718.0	694.7	688.0	681.4	680.7	680.0	685.4	690.7
50°	762.6	724.0	685.4	666.7	648.1	642.1	636.1	638.1	640.1	648.8	657.4
52.5°	708.0	672.1	636.1	618.8	601.5	597.5	593.5	598.2	602.9	612.2	621.5
55°	648.1	615.5	582.9	569.6	556.3	552.3	548.3	557.6	566.9	575.6	584.2
57.5°	590.9	562.3	533.7	521.7	509.7	509.0	508.4	517.0	525.7	535.0	544.3
60°	529.7	505.7	481.8	472.4	463.1	464.5	465.8	475.8	485.7	493.1	500.4
62.5°	473.8	453.8	433.8	425.2	416.5	419.9	423.2	433.2	443.2	451.8	460.5
65°	417.9	401.2	384.6	378.6	372.6	377.3	381.9	390.6	399.2	405.2	411.2
67.5°	364.6	350.7	336.7	332.0	327.4	332.0	336.7	345.3	354.0	360.0	366.0
70°	308.7	297.4	286.1	282.8	279.5	284.8	290.1	297.4	304.8	310.7	316.7
72.5°	256.8	248.2	239.5	238.9	238.2	242.9	247.5	254.9	262.2	266.2	270.2
75°	206.3	201.6	197.0	196.3	195.6	200.3	204.9	208.9	212.9	216.3	219.6
77.5°	161.0	157.0	153.0	153.7	154.4	157.7	161.0	165.0	169.0	171.0	173.0
80°	114.5	113.1	111.8	113.1	114.5	117.1	119.8	122.4	125.1	126.4	127.8
82.5°	78.5	77.2	75.9	77.9	79.8	81.8	83.8	85.8	87.8	88.5	89.2
85°	45.2	47.2	49.2	49.2	49.2	49.9	50.6	51.2	51.9	51.2	50.6
87.5°	21.3	22.0	22.6	22.6	22.6	23.3	24.0	24.0	24.0	23.3	22.6
90°	6.3	7.4	9.1	10.8	12.5	14.3	13.7	14.3	14.8	15.4	16.5
92.5°	29.1	39.4	57.6	87.8	117.5	106.1	79.3	56.5	43.9	38.2	34.2
95°	51.9	74.1	122.6	207.6	301.2	338.2	274.3	205.3	139.2	108.9	88.4
97.5°	59.9	84.4	132.3	231.0	388.4	520.2	537.9	471.7	355.9	280.6	215.6
100°	68.4	90.7	130.6	215.0	365.0	540.1	652.5	672.5	626.3	559.5	478.5
102.5°	78.1	98.1	132.9	201.3	330.8	503.1	658.2	739.2	748.9	717.0	673.0
105°	89.0	106.7	137.5	196.2	304.0	458.6	622.3	741.5	798.5	809.4	794.5
107.5°	101.0	117.5	144.9	195.1	284.6	419.2	570.9	707.3	796.8	841.3	856.7
110°	112.9	128.9	154.6	197.9	274.3	386.7	523.0	653.6	758.6	830.5	870.4



TEST NUMBER: P831131

CATALOG NUMBER: S123DIP-S1000D585U835-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	125.5	140.9	164.3	203.6	268.6	365.0	481.4	600.6	708.4	791.1	845.3
115°	138.0	153.4	175.1	209.9	268.1	350.8	449.5	555.0	654.2	738.1	800.2
117.5°	150.6	164.8	186.5	217.9	268.6	341.1	428.4	519.6	607.4	684.4	748.9
120°	162.6	176.8	197.3	227.0	270.9	334.8	412.4	492.8	569.8	638.2	695.9
122.5°	173.4	188.8	208.8	235.6	274.9	330.8	399.3	471.7	539.6	601.7	654.2
125°	184.2	199.6	219.6	244.7	278.9	327.4	388.4	453.4	515.6	570.4	616.0
127.5°	194.5	209.9	229.3	252.1	283.5	325.7	378.2	436.9	493.4	543.6	585.8
130°	203.6	219.0	237.8	259.5	288.0	324.0	370.2	421.5	472.8	519.0	557.8
132.5°	212.2	227.0	245.3	266.4	291.5	323.4	362.8	407.2	453.4	495.7	532.2
135°	219.6	235.0	252.7	272.1	294.9	322.8	356.5	394.7	435.2	472.3	504.8
137.5°	226.4	240.7	257.8	276.6	297.2	321.7	350.8	382.7	416.9	450.0	479.1
140°	232.1	246.4	262.9	280.1	299.4	321.1	345.6	372.5	401.5	428.9	453.4
142.5°	237.8	251.0	266.9	283.5	301.2	320.0	341.1	362.8	386.7	409.5	430.1
145°	242.4	255.5	270.4	285.8	301.7	318.8	337.1	355.3	374.2	392.4	409.0
147.5°	248.1	259.5	273.2	287.5	301.7	317.1	333.1	349.1	364.5	379.9	391.8
150°	252.7	262.9	276.1	288.0	301.7	314.8	329.1	342.2	355.3	367.3	378.2
152.5°	257.2	266.9	277.8	289.2	300.0	312.0	324.5	336.0	346.8	357.1	365.6
155°	262.4	270.4	280.1	289.2	298.9	308.6	320.0	329.7	338.8	347.4	354.2
157.5°	266.9	273.2	281.2	289.8	297.2	305.7	314.8	322.8	330.8	337.7	343.4
160°	270.4	276.1	282.9	289.8	296.0	302.3	309.7	317.1	323.4	329.1	333.1
162.5°	273.2	277.8	283.5	289.2	293.7	298.9	304.6	310.3	315.4	320.6	324.0
165°	275.5	279.5	284.0	288.0	291.5	295.5	300.0	304.6	308.0	312.0	314.8
167.5°	277.8	280.6	284.0	287.5	289.2	292.0	295.5	299.4	302.3	304.6	306.9
170°	279.5	280.6	283.5	285.8	286.9	288.6	291.5	294.3	296.0	298.3	299.4
172.5°	280.6	281.2	283.5	285.2	285.2	285.8	287.5	289.8	290.9	292.6	293.2
175°	281.2	281.8	282.9	284.0	283.5	283.5	284.6	285.8	286.3	287.5	287.5
177.5°	281.8	281.8	282.3	283.5	282.3	281.8	282.3	282.9	283.5	284.0	284.0
180°	281.8	281.8	281.8	281.8	281.8	281.8	281.8	281.8	281.8	281.8	281.8



TEST NUMBER: P831131

CATALOG NUMBER: S123DIP-S1000D585U835-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	2867.9	2867.9	2867.9	2867.9
2.5°	2549.2	2544.5	2525.9	2507.3
5°	2161.2	2145.3	2140.0	2134.6
7.5°	1888.4	1887.1	1859.2	1831.2
10°	1648.2	1650.2	1624.9	1599.6
12.5°	1476.5	1459.9	1457.9	1455.9
15°	1347.5	1332.1	1329.5	1326.8
17.5°	1256.3	1247.0	1244.3	1241.7
20°	1187.1	1181.8	1177.1	1172.5
22.5°	1127.2	1120.5	1116.6	1112.6
25°	1069.3	1063.3	1062.0	1060.7
27.5°	1017.4	1010.1	1010.1	1010.1
30°	968.2	963.5	961.5	959.5
32.5°	922.3	918.3	918.3	918.3
35°	879.0	877.0	874.3	871.7
37.5°	839.7	839.7	838.4	837.1
40°	801.8	803.8	803.8	803.8
42.5°	767.2	769.2	769.2	769.2
45°	731.3	734.6	735.9	737.3
47.5°	696.0	701.3	702.7	704.0
50°	661.4	665.4	666.1	666.7
52.5°	626.1	630.8	634.1	637.5
55°	588.9	593.5	595.5	597.5
57.5°	549.0	553.6	554.3	555.0
60°	505.0	509.7	511.0	512.4
62.5°	463.1	465.8	467.1	468.4
65°	415.2	419.2	421.9	424.5
67.5°	369.3	372.6	372.6	372.6
70°	318.1	319.4	321.4	323.4
72.5°	270.8	271.5	271.5	271.5
75°	220.9	222.2	222.9	223.6
77.5°	173.7	174.3	174.3	174.3
80°	127.1	126.4	126.4	126.4
82.5°	87.2	85.2	85.2	85.2
85°	49.9	49.2	49.9	50.6
87.5°	22.6	22.6	22.6	22.6
90°	16.0	16.5	17.1	16.5
92.5°	33.1	30.8	31.4	30.2
95°	77.6	72.4	68.4	66.2
97.5°	177.4	155.7	142.0	135.7
100°	420.9	379.3	357.1	357.6
102.5°	631.4	600.6	582.9	566.4
105°	768.3	746.6	728.4	725.5
107.5°	853.3	843.0	835.6	829.3
110°	886.4	890.9	889.8	888.6



TEST NUMBER: P831131

CATALOG NUMBER: S123DIP-S1000D585U835-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
112.5°	877.8	894.3	900.1	900.6
115°	843.0	868.1	879.5	882.4
117.5°	793.4	821.3	838.4	842.4
120°	740.9	772.9	786.5	790.0
122.5°	693.0	721.0	736.4	740.9
125°	652.5	677.6	691.9	695.9
127.5°	618.9	640.5	653.6	657.1
130°	588.1	608.6	620.6	625.1
132.5°	560.1	580.6	590.9	593.8
135°	532.7	549.8	560.1	564.1
137.5°	503.1	520.8	529.3	532.7
140°	475.1	491.1	500.2	499.6
142.5°	447.7	461.4	469.4	468.8
145°	423.2	435.2	439.8	440.9
147.5°	403.3	411.8	416.4	416.9
150°	386.7	393.0	396.4	396.4
152.5°	371.9	377.6	379.3	379.3
155°	359.3	363.9	365.0	365.6
157.5°	347.9	351.4	352.5	352.5
160°	337.1	340.5	340.5	339.9
162.5°	326.3	329.1	329.1	328.5
165°	317.1	319.4	318.8	318.8
167.5°	308.0	309.7	309.1	309.1
170°	300.0	301.2	300.6	300.6
172.5°	293.2	294.3	293.2	292.6
175°	287.5	288.0	287.5	286.9
177.5°	283.5	284.0	282.9	282.9
180°	281.8	281.8	281.8	281.8

TEST NUMBER: P831131

CATALOG NUMBER: S123DIP-S1000D585U835-4F0-1E-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	17.06	18.06	17.85	18.87	19.85	19.30	20.30	20.09	21.11	22.09
	3H	18.72	19.62	19.52	20.43	21.44	20.73	21.63	21.54	22.45	23.46
	4H	19.30	20.15	20.12	20.97	22.00	21.19	22.04	22.01	22.86	23.88
	6H	19.68	20.46	20.51	21.29	22.33	21.47	22.25	22.31	23.08	24.12
	8H	19.78	20.52	20.62	21.37	22.41	21.54	22.28	22.38	23.13	24.17
	12H	19.83	20.54	20.68	21.38	22.44	21.56	22.27	22.41	23.11	24.18
4H	2H	17.65	18.50	18.48	19.32	20.35	19.48	20.33	20.30	21.15	22.17
	3H	19.50	20.20	20.33	21.06	22.09	21.11	21.81	21.95	22.67	23.71
	4H	20.20	20.84	21.05	21.69	22.76	21.70	22.34	22.55	23.19	24.26
	6H	20.68	21.23	21.54	22.11	23.18	22.11	22.66	22.98	23.54	24.61
	8H	20.82	21.34	21.69	22.21	23.29	22.23	22.74	23.09	23.62	24.70
	12H	20.89	21.36	21.78	22.25	23.34	22.28	22.74	23.16	23.63	24.72
8H	4H	20.47	20.99	21.34	21.86	22.95	21.82	22.33	22.68	23.20	24.29
	6H	21.07	21.49	21.96	22.41	23.49	22.32	22.75	23.22	23.66	24.75
	8H	21.28	21.65	22.18	22.56	23.66	22.50	22.88	23.41	23.79	24.89
	12H	21.41	21.74	22.31	22.64	23.79	22.61	22.94	23.52	23.84	25.00
12H	4H	20.48	20.95	21.37	21.84	22.93	21.80	22.26	22.68	23.15	24.24
	6H	21.12	21.50	22.02	22.41	23.51	22.34	22.72	23.24	23.62	24.73
	8H	21.36	21.69	22.27	22.59	23.75	22.54	22.88	23.45	23.78	24.93