

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: P831643

Luminaire Tested: S123DIP-S775D365U835-4F0-1E-UDD-G1

Issue Date: 05/03/2024

Test Information

Test Method: LM-79-2019
Report Number: P831643
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2301-905-1, G3-1807-864-9)
Test Lab: INNOVATION CENTER
Issue Date: 05/03/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123DIP-S775D365U835-4F0-1E-UDD-G1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, GRAZE OPTIC
UPLIGHT 365 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: -

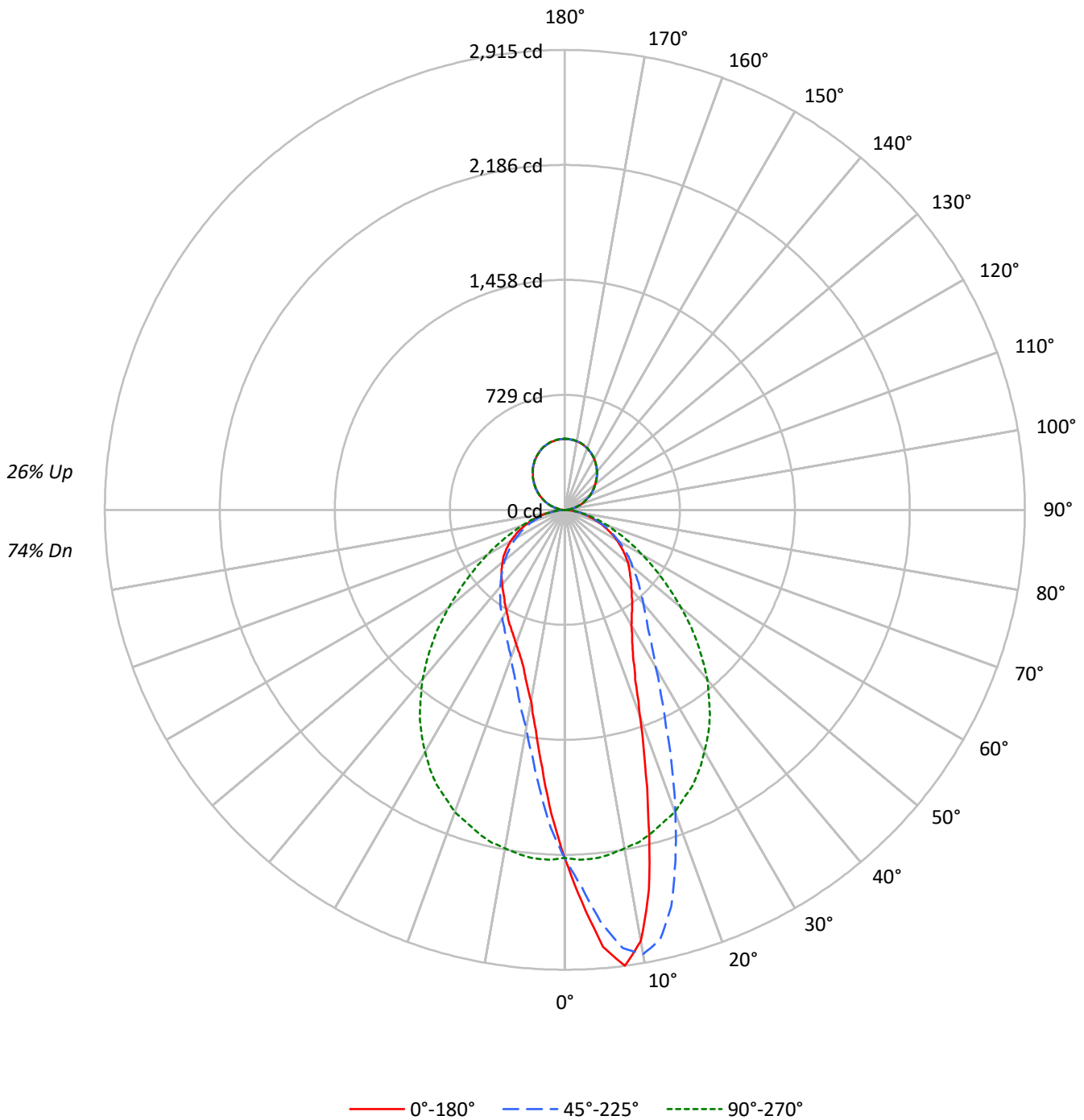
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4794.2 lumens
Efficiency: N/A
Efficacy: 133.5 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): 35.9
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	113	113	113	113	107	107	107	107	97	97	97	87	87	87	78	78	78	74				74
1	104	100	96	93	99	95	92	89	86	83	81	78	76	74	70	69	68				64	
2	95	88	82	77	90	84	79	74	76	72	69	69	66	63	63	60	58				55	
3	88	78	71	65	83	75	68	63	68	63	59	62	58	55	57	53	51				48	
4	81	70	62	56	77	67	60	55	61	56	51	56	52	48	51	48	45				42	
5	75	63	55	49	71	61	53	48	56	50	45	51	46	42	47	43	40				37	
6	69	57	49	44	66	55	48	42	51	45	40	47	42	38	43	39	35				33	
7	65	52	45	39	61	50	43	38	47	40	36	43	38	34	40	35	32				30	
8	60	48	40	35	57	46	39	34	43	37	33	40	35	31	37	32	29				27	
9	57	44	37	32	54	43	36	31	40	34	30	37	32	28	34	30	27				25	
10	53	41	34	29	51	40	33	29	37	31	27	35	30	26	32	28	25				23	

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	23750	23750	23750	23750	23750
5°	30035	28348	23961	19310	17744
10°	30326	31243	23802	15393	13450
15°	22841	29008	23640	13035	11375
20°	15914	23473	23338	11400	10332
25°	12136	18051	22823	10488	9691
30°	10499	14342	22002	9843	9175
35°	9741	12107	21055	9377	8812
40°	9222	10862	19724	8934	8689
45°	8914	10053	18033	8587	8634
50°	8761	9413	16031	8272	8589
55°	8435	8944	14063	7974	8627
60°	8133	8441	12122	7692	8486
65°	7641	7967	10458	7394	8318
70°	7056	7361	8894	6895	7830
75°	6388	6600	7623	6409	7153
80°	5269	5777	6031	5585	6031
85°	4174	4681	4421	4742	4804

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 80°
 Vertical Angle: 45°
 Luminance: 20588 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	208.6	4.4
10°-20°	518.9	10.8
20°-30°	614.4	12.8
30°-40°	617.8	12.9
40°-50°	566.8	11.8
50°-60°	467.8	9.8
60°-70°	330.9	6.9
70°-80°	176.7	3.7
80°-90°	45.8	1.0
90°-100°	29.0	0.6
100°-110°	87.7	1.8
110°-120°	149.2	3.1
120°-130°	196.3	4.1
130°-140°	220.7	4.6
140°-150°	216.9	4.5
150°-160°	182.6	3.8
160°-170°	121.6	2.5
170°-180°	42.6	0.9
0°-30°	1341.9	28.0
0°-40°	1959.7	40.9
0°-60°	2994.4	62.5
0°-90°	3547.7	74.0
90°-120°	265.8	5.5
90°-150°	899.7	18.8
90°-180°	1246.0	26.0
0°-180°	4794.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2206	2206	2206	2206	2206	
5°	2780	2624	2218	1787	1642	265
15°	2050	2603	2121	1170	1021	566
25°	1022	1520	1922	883	816	482
35°	741	921	1602	714	671	466
45°	586	660	1185	564	567	454
55°	450	477	749	425	460	402
65°	300	313	411	290	327	298
75°	154	159	183	154	172	161
85°	34	38	36	38	39	38
90°	11	8	0	8	11	7
95°	28	26	21	26	28	28
105°	84	83	80	83	84	89
115°	150	150	150	150	150	149
125°	217	220	220	220	217	194
135°	285	287	285	287	285	219
145°	346	348	346	348	346	216
155°	395	396	396	396	395	182
165°	430	430	432	430	430	121
175°	447	447	449	447	447	42
180°	450	450	450	450	450	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	2206.4	2206.4	2206.4	2206.4	2206.4	2206.4	2206.4	2206.4	2206.4	2206.4	2206.4
2.5°	2486.9	2484.3	2481.8	2469.0	2456.2	2450.0	2443.9	2425.5	2407.0	2386.5	2366.1
5°	2779.7	2786.9	2794.0	2785.8	2777.7	2752.6	2727.5	2694.2	2660.9	2623.6	2586.2
7.5°	2914.8	2918.9	2923.0	2917.9	2912.8	2906.1	2899.5	2869.8	2840.1	2801.7	2763.3
10°	2774.6	2783.8	2793.0	2813.0	2832.9	2855.5	2878.0	2873.9	2869.8	2858.5	2847.3
12.5°	2466.4	2477.7	2488.9	2528.9	2568.8	2620.0	2671.2	2715.2	2759.2	2789.9	2820.7
15°	2049.7	2080.9	2112.2	2148.5	2184.9	2260.1	2335.4	2428.0	2520.7	2603.1	2685.5
17.5°	1688.3	1700.1	1711.8	1750.7	1789.7	1884.4	1979.1	2086.1	2193.0	2329.7	2466.4
20°	1389.3	1400.1	1410.8	1462.0	1513.2	1587.4	1661.7	1782.0	1902.3	2049.2	2196.1
22.5°	1167.2	1184.1	1201.0	1229.6	1258.3	1329.4	1400.6	1507.6	1614.6	1776.9	1939.1
25°	1021.8	1034.1	1046.4	1063.8	1081.2	1138.0	1194.8	1282.9	1370.9	1519.9	1668.8
27.5°	922.5	927.6	932.7	950.1	967.5	1004.4	1041.2	1117.0	1192.8	1319.2	1445.6
30°	844.7	848.2	851.8	867.2	882.5	907.6	932.7	987.5	1042.3	1153.9	1265.5
32.5°	790.4	793.0	795.5	807.3	819.1	837.0	854.9	894.8	934.8	1026.9	1119.0
35°	741.3	742.8	744.3	753.0	761.7	775.0	788.3	818.6	848.8	921.4	994.1
37.5°	698.3	700.3	702.3	707.5	712.6	724.4	736.1	760.2	784.3	840.1	895.9
40°	656.3	659.9	663.4	667.0	670.6	680.3	690.1	708.5	726.9	773.0	819.1
42.5°	620.4	624.0	627.6	629.1	630.7	636.3	641.9	658.8	675.7	710.0	744.3
45°	585.6	587.2	588.7	590.2	591.8	596.4	601.0	615.8	630.7	660.4	690.1
47.5°	553.9	553.9	553.9	554.9	555.9	560.0	564.1	574.9	585.6	608.7	631.7
50°	523.2	523.2	523.2	521.6	520.1	522.7	525.2	533.4	541.6	562.1	582.6
52.5°	486.3	486.3	486.3	486.8	487.3	487.3	487.3	494.5	501.7	520.1	538.5
55°	449.5	451.5	453.6	452.0	450.5	451.5	452.5	457.1	461.7	476.6	491.4
57.5°	412.6	413.6	414.7	414.1	413.6	414.1	414.7	418.7	422.8	434.1	445.4
60°	377.8	377.8	377.8	376.8	375.7	376.8	377.8	379.8	381.9	392.1	402.4
62.5°	338.9	339.4	339.9	340.4	340.9	339.9	338.9	341.4	344.0	351.7	359.4
65°	300.0	300.5	301.0	302.5	304.1	303.1	302.0	304.6	307.1	312.8	318.4
67.5°	265.2	264.1	263.1	263.6	264.1	265.7	267.2	267.7	268.2	274.4	280.5
70°	224.2	225.2	226.3	225.8	225.2	225.8	226.3	227.8	229.3	233.9	238.6
72.5°	187.4	187.9	188.4	188.4	188.4	189.4	190.4	192.0	193.5	196.1	198.6
75°	153.6	153.6	153.6	154.6	155.6	156.1	156.6	156.6	156.6	158.7	160.7
77.5°	116.7	119.3	121.8	121.3	120.8	121.8	122.9	124.4	125.9	127.0	128.0
80°	85.0	85.0	85.0	85.5	86.0	87.5	89.1	90.1	91.1	93.2	95.2
82.5°	54.3	54.8	55.3	56.8	58.4	59.4	60.4	61.9	63.5	63.5	63.5
85°	33.8	32.8	31.7	32.8	33.8	34.8	35.8	36.3	36.9	37.9	38.9
87.5°	16.4	16.4	16.4	16.4	16.4	16.9	17.4	17.4	17.4	17.4	17.4
90°	10.6	10.4	10.3	10.1	10.0	9.7	9.4	9.1	8.8	8.5	7.5
92.5°	15.2	15.4	15.5	15.7	15.8	15.8	15.5	15.3	15.1	14.8	14.4
95°	27.6	27.6	27.6	27.6	27.6	27.4	27.1	26.8	26.5	26.2	25.5
97.5°	39.6	39.7	39.7	39.8	39.9	39.7	39.3	39.0	38.6	38.2	37.7
100°	53.7	53.6	53.4	53.2	53.1	52.9	52.7	52.4	52.2	51.9	51.6
102.5°	68.2	68.3	68.4	68.4	68.5	68.4	68.2	68.0	67.7	67.5	66.9
105°	84.1	84.0	83.8	83.6	83.5	83.4	83.4	83.4	83.4	83.4	82.7
107.5°	100.4	100.4	100.5	100.6	100.7	100.6	100.4	100.1	99.9	99.7	99.3
110°	117.0	117.1	117.3	117.4	117.6	117.5	117.2	116.9	116.6	116.3	116.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	134.6	134.6	134.6	134.6	134.6	134.4	134.1	133.7	133.3	132.9	132.9
115°	150.5	150.6	150.7	150.8	150.9	150.9	150.8	150.7	150.6	150.5	150.7
117.5°	166.8	167.0	167.3	167.5	167.7	167.9	167.9	167.9	167.9	167.9	168.0
120°	184.1	184.3	184.4	184.6	184.7	184.9	184.9	185.0	185.1	185.2	185.6
122.5°	200.7	201.0	201.2	201.4	201.7	201.9	202.1	202.4	202.6	202.8	203.0
125°	217.3	217.6	218.0	218.3	218.6	218.9	219.2	219.5	219.8	220.2	220.3
127.5°	233.9	234.3	234.6	234.9	235.2	235.6	236.1	236.5	237.0	237.5	237.6
130°	250.2	250.8	251.3	251.9	252.4	252.8	253.1	253.5	253.8	254.1	254.3
132.5°	267.2	267.6	267.9	268.3	268.7	269.1	269.5	269.9	270.3	270.7	270.9
135°	284.8	285.0	285.1	285.3	285.5	285.7	286.0	286.3	286.6	287.0	287.0
137.5°	300.4	300.6	300.9	301.1	301.3	301.6	302.0	302.4	302.8	303.2	303.0
140°	315.6	316.1	316.7	317.2	317.8	318.1	318.2	318.2	318.3	318.4	318.3
142.5°	331.1	331.5	331.9	332.3	332.7	332.9	333.0	333.1	333.2	333.2	333.1
145°	346.0	346.3	346.6	346.9	347.2	347.4	347.5	347.6	347.7	347.7	347.5
147.5°	359.4	359.9	360.3	360.8	361.3	361.5	361.5	361.5	361.5	361.5	361.3
150°	372.1	372.6	373.1	373.5	374.0	374.2	374.2	374.2	374.2	374.2	374.1
152.5°	384.5	384.9	385.3	385.7	386.1	386.2	386.0	385.9	385.7	385.5	385.5
155°	395.4	396.0	396.5	397.1	397.6	397.8	397.4	397.1	396.8	396.5	396.4
157.5°	405.7	406.2	406.6	407.1	407.6	407.7	407.3	407.0	406.7	406.4	406.3
160°	415.6	415.9	416.2	416.5	416.8	416.8	416.4	416.0	415.6	415.2	415.2
162.5°	423.0	423.6	424.1	424.7	425.2	425.3	424.9	424.5	424.1	423.7	423.6
165°	430.1	430.6	431.2	431.7	432.3	432.3	431.8	431.4	430.9	430.4	430.4
167.5°	436.4	436.9	437.4	437.9	438.3	438.3	437.9	437.4	436.9	436.4	436.4
170°	441.0	441.6	442.1	442.7	443.2	443.2	442.7	442.1	441.6	441.0	441.0
172.5°	444.6	445.1	445.7	446.2	446.8	446.8	446.3	445.9	445.4	444.9	444.9
175°	447.0	447.6	448.1	448.7	449.2	449.3	448.8	448.3	447.9	447.4	447.4
177.5°	448.5	449.0	449.6	450.1	450.7	450.7	450.2	449.7	449.3	448.8	448.8
180°	449.9	449.9	449.9	449.9	449.9	449.9	449.9	449.9	449.9	449.9	449.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	2206.4	2206.4	2206.4	2206.4	2206.4	2206.4	2206.4	2206.4	2206.4	2206.4	2206.4
2.5°	2359.9	2353.8	2331.3	2308.7	2283.1	2257.5	2238.6	2219.7	2191.5	2163.4	2140.3
5°	2557.5	2528.9	2481.3	2433.6	2369.1	2304.6	2261.1	2217.6	2159.3	2100.9	2054.3
7.5°	2714.2	2665.0	2598.5	2531.9	2447.5	2363.0	2283.1	2203.3	2114.2	2025.1	1952.4
10°	2814.0	2780.7	2703.9	2627.1	2514.0	2400.9	2289.3	2177.7	2063.0	1948.3	1852.1
12.5°	2823.7	2826.8	2756.1	2685.5	2557.5	2429.5	2293.9	2158.2	2013.9	1869.5	1757.4
15°	2738.2	2791.0	2752.1	2713.1	2584.1	2455.1	2288.3	2121.4	1955.0	1788.6	1659.1
17.5°	2579.5	2692.7	2698.3	2703.9	2574.9	2445.9	2261.1	2076.3	1887.9	1699.6	1563.4
20°	2363.0	2529.9	2587.2	2644.6	2539.6	2434.7	2236.0	2037.4	1826.5	1615.6	1472.8
22.5°	2141.9	2344.6	2449.5	2554.5	2476.6	2398.8	2187.4	1976.0	1753.3	1530.6	1385.8
25°	1890.0	2111.1	2272.4	2433.6	2386.0	2338.4	2130.1	1921.7	1684.7	1447.7	1299.8
27.5°	1670.4	1895.1	2089.6	2284.2	2273.9	2263.7	2056.9	1850.1	1607.4	1364.8	1221.9
30°	1474.8	1684.2	1901.8	2119.3	2144.4	2169.5	1969.8	1770.2	1527.0	1283.9	1146.2
32.5°	1301.8	1484.6	1718.0	1951.4	2000.6	2049.7	1869.5	1689.3	1448.7	1208.1	1075.5
35°	1160.0	1325.9	1559.3	1792.7	1854.2	1915.6	1758.9	1602.3	1367.8	1133.4	1006.9
37.5°	1034.6	1173.3	1401.1	1628.9	1704.2	1779.4	1639.2	1498.9	1279.3	1059.7	943.5
40°	930.7	1042.3	1251.6	1461.0	1548.0	1635.1	1519.4	1403.7	1195.3	987.0	880.0
42.5°	843.6	942.9	1132.9	1322.8	1406.2	1489.7	1391.9	1294.1	1108.8	923.5	825.7
45°	769.4	848.8	1021.3	1193.8	1273.1	1352.5	1268.5	1184.6	1021.3	858.0	766.8
47.5°	699.8	767.9	915.3	1062.7	1133.4	1204.0	1138.5	1073.0	934.8	796.5	714.1
50°	637.3	692.1	821.1	950.1	1011.5	1073.0	1015.1	957.3	843.6	730.0	658.3
52.5°	583.1	627.6	735.6	843.6	896.4	949.1	899.4	849.8	759.7	669.6	607.1
55°	529.3	567.2	660.9	754.6	790.4	826.2	787.8	749.4	676.8	604.1	551.3
57.5°	479.2	512.9	589.7	666.5	694.2	721.8	687.0	652.2	597.4	542.6	498.6
60°	430.0	457.7	521.6	585.6	602.5	619.4	591.3	563.1	524.7	486.3	446.9
62.5°	384.4	409.5	457.1	504.7	516.0	527.3	505.8	484.3	455.1	425.9	395.2
65°	337.4	356.3	395.2	434.1	441.3	448.4	429.5	410.6	388.5	366.5	344.0
67.5°	293.8	307.1	338.9	370.6	371.1	371.7	356.3	340.9	328.6	316.4	298.4
70°	251.4	264.1	285.1	306.1	306.6	307.1	294.9	282.6	273.4	264.1	250.8
72.5°	207.8	217.1	232.9	248.8	247.8	246.7	239.1	231.4	224.2	217.1	207.3
75°	168.4	176.1	186.8	197.6	194.5	191.5	187.4	183.3	177.1	171.0	164.8
77.5°	132.6	137.2	143.3	149.5	147.4	145.4	141.8	138.2	133.6	129.0	126.4
80°	97.3	99.3	103.4	107.5	106.5	105.5	101.4	97.3	96.2	95.2	91.6
82.5°	66.0	68.6	69.6	70.6	70.1	69.6	66.5	63.5	62.5	61.4	60.9
85°	39.4	39.9	40.4	41.0	39.4	37.9	36.9	35.8	35.8	35.8	35.3
87.5°	17.9	18.4	18.4	18.4	17.9	17.4	16.4	15.4	15.9	16.4	16.4
90°	6.4	5.4	4.4	3.5	2.7	1.9	1.1	0.4	1.1	1.9	2.7
92.5°	13.9	13.4	13.0	12.5	12.0	11.5	11.1	10.6	11.1	11.5	12.0
95°	24.9	24.3	23.6	23.0	22.5	21.9	21.4	20.9	21.4	21.9	22.5
97.5°	37.2	36.8	36.3	35.8	35.5	35.1	34.7	34.3	34.7	35.1	35.5
100°	51.2	50.8	50.4	49.9	49.5	49.0	48.5	48.1	48.5	49.0	49.5
102.5°	66.4	65.8	65.3	64.9	64.7	64.4	64.2	64.0	64.2	64.4	64.7
105°	82.0	81.3	80.6	80.1	80.0	79.8	79.7	79.5	79.7	79.8	80.0
107.5°	99.0	98.7	98.4	98.2	98.1	98.0	98.0	97.9	98.0	98.0	98.1
110°	116.0	115.8	115.6	115.5	115.3	115.2	115.0	114.9	115.0	115.2	115.3



TEST NUMBER: P831643

CATALOG NUMBER: S123DIP-S775D365U835-4F0-1E-UDD-G1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	132.9	132.9	132.9	132.8	132.8	132.7	132.6	132.5	132.6	132.7	132.8
115°	150.9	151.0	151.2	151.1	150.9	150.7	150.4	150.2	150.4	150.7	150.9
117.5°	168.2	168.3	168.5	168.5	168.4	168.4	168.3	168.2	168.3	168.4	168.4
120°	186.0	186.4	186.7	186.7	186.2	185.8	185.3	184.8	185.3	185.8	186.2
122.5°	203.2	203.3	203.5	203.4	203.1	202.8	202.5	202.1	202.5	202.8	203.1
125°	220.5	220.6	220.8	220.8	220.5	220.3	220.0	219.8	220.0	220.3	220.5
127.5°	237.8	238.0	238.1	238.0	237.5	237.0	236.5	236.1	236.5	237.0	237.5
130°	254.6	254.8	255.0	254.8	254.2	253.6	252.9	252.3	252.9	253.6	254.2
132.5°	271.0	271.2	271.3	271.1	270.5	269.8	269.2	268.6	269.2	269.8	270.5
135°	287.1	287.2	287.3	287.1	286.6	286.1	285.7	285.2	285.7	286.1	286.6
137.5°	302.7	302.5	302.3	302.0	301.6	301.2	300.8	300.4	300.8	301.2	301.6
140°	318.2	318.2	318.1	317.9	317.5	317.1	316.7	316.3	316.7	317.1	317.5
142.5°	332.9	332.8	332.6	332.3	332.0	331.6	331.2	330.8	331.2	331.6	332.0
145°	347.3	347.0	346.8	346.6	346.4	346.3	346.1	346.0	346.1	346.3	346.4
147.5°	361.0	360.8	360.6	360.3	360.0	359.7	359.4	359.0	359.4	359.7	360.0
150°	373.9	373.8	373.6	373.5	373.3	373.1	373.0	372.8	373.0	373.1	373.3
152.5°	385.4	385.3	385.2	385.1	384.8	384.6	384.4	384.1	384.4	384.6	384.8
155°	396.3	396.3	396.2	396.2	396.2	396.2	396.2	396.2	396.2	396.2	396.2
157.5°	406.2	406.2	406.1	406.1	406.2	406.2	406.3	406.4	406.3	406.2	406.2
160°	415.2	415.2	415.2	415.3	415.5	415.6	415.8	415.9	415.8	415.6	415.5
162.5°	423.6	423.5	423.4	423.5	423.7	424.0	424.2	424.4	424.2	424.0	423.7
165°	430.4	430.4	430.4	430.5	430.8	431.0	431.3	431.5	431.3	431.0	430.8
167.5°	436.3	436.2	436.1	436.2	436.6	436.9	437.2	437.5	437.2	436.9	436.6
170°	441.0	441.0	441.0	441.2	441.5	441.8	442.1	442.4	442.1	441.8	441.5
172.5°	444.9	444.9	444.9	445.1	445.4	445.7	446.0	446.3	446.0	445.7	445.4
175°	447.4	447.4	447.4	447.6	447.9	448.2	448.5	448.8	448.5	448.2	447.9
177.5°	448.8	448.8	448.8	449.0	449.3	449.6	449.9	450.2	449.9	449.6	449.3
180°	449.9	449.9	449.9	449.9	449.9	449.9	449.9	449.9	449.9	449.9	449.9



TEST NUMBER: P831643

CATALOG NUMBER: S123DIP-S775D365U835-4F0-1E-UDD-G1

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	2206.4	2206.4	2206.4	2206.4	2206.4	2206.4	2206.4	2206.4	2206.4	2206.4	2206.4
2.5°	2117.3	2097.3	2077.4	2062.0	2046.6	2020.5	1994.4	1988.3	1982.1	1973.4	1964.7
5°	2007.7	1958.6	1909.4	1865.4	1821.4	1787.1	1752.8	1730.3	1707.7	1691.4	1675.0
7.5°	1879.8	1806.0	1732.3	1680.1	1627.9	1578.2	1528.6	1512.7	1496.8	1475.3	1453.8
10°	1755.9	1674.5	1593.1	1525.0	1456.9	1408.3	1359.6	1340.2	1320.7	1293.6	1266.5
12.5°	1645.3	1556.2	1467.1	1398.6	1330.0	1282.9	1235.8	1207.6	1179.5	1164.1	1148.7
15°	1529.6	1434.4	1339.2	1275.7	1212.2	1169.7	1127.2	1102.7	1078.1	1063.2	1048.4
17.5°	1427.2	1333.0	1238.8	1177.9	1117.0	1078.1	1039.2	1017.7	996.2	984.9	973.7
20°	1330.0	1237.8	1145.7	1086.3	1026.9	995.2	963.4	949.6	935.8	926.6	917.4
22.5°	1240.9	1150.3	1059.7	1009.0	958.3	932.7	907.1	897.4	887.7	880.0	872.3
25°	1151.8	1070.9	990.0	947.0	904.0	883.1	862.1	852.3	842.6	834.9	827.3
27.5°	1079.1	1001.8	924.5	887.7	850.8	834.4	818.0	810.4	802.7	795.5	788.3
30°	1008.5	939.4	870.3	838.5	806.8	791.9	777.1	769.4	761.7	755.1	748.4
32.5°	942.9	883.6	824.2	795.0	765.8	753.5	741.3	732.0	722.8	717.7	712.6
35°	880.5	827.3	774.0	750.0	725.9	713.6	701.3	693.6	686.0	681.9	677.8
37.5°	827.3	779.6	732.0	709.0	686.0	674.2	662.4	655.8	649.1	647.6	646.0
40°	773.0	732.0	691.1	668.6	646.0	635.8	625.6	621.5	617.4	616.3	615.3
42.5°	727.9	688.0	648.1	627.6	607.1	598.4	589.7	587.7	585.6	587.2	588.7
45°	675.7	642.5	609.2	590.2	571.3	564.1	557.0	555.4	553.9	557.0	560.0
47.5°	631.7	601.0	570.3	552.4	534.4	529.3	524.2	523.7	523.2	527.3	531.4
50°	586.7	557.0	527.3	512.9	498.6	494.0	489.4	490.9	492.5	499.1	505.8
52.5°	544.7	517.0	489.4	476.1	462.8	459.7	456.6	460.2	463.8	471.0	478.1
55°	498.6	473.5	448.4	438.2	428.0	424.9	421.8	429.0	436.2	442.8	449.5
57.5°	454.6	432.6	410.6	401.3	392.1	391.6	391.1	397.8	404.4	411.6	418.7
60°	407.5	389.1	370.6	363.5	356.3	357.3	358.3	366.0	373.7	379.3	385.0
62.5°	364.5	349.1	333.8	327.1	320.5	323.0	325.6	333.3	340.9	347.6	354.2
65°	321.5	308.7	295.9	291.3	286.7	290.3	293.8	300.5	307.1	311.8	316.4
67.5°	280.5	269.8	259.0	255.4	251.9	255.4	259.0	265.7	272.3	276.9	281.6
70°	237.5	228.8	220.1	217.6	215.0	219.1	223.2	228.8	234.5	239.1	243.7
72.5°	197.6	190.9	184.3	183.8	183.3	186.8	190.4	196.1	201.7	204.8	207.8
75°	158.7	155.1	151.5	151.0	150.5	154.1	157.7	160.7	163.8	166.4	168.9
77.5°	123.9	120.8	117.7	118.3	118.8	121.3	123.9	127.0	130.0	131.6	133.1
80°	88.0	87.0	86.0	87.0	88.0	90.1	92.1	94.2	96.2	97.3	98.3
82.5°	60.4	59.4	58.4	59.9	61.4	63.0	64.5	66.0	67.6	68.1	68.6
85°	34.8	36.3	37.9	37.9	37.9	38.4	38.9	39.4	39.9	39.4	38.9
87.5°	16.4	16.9	17.4	17.4	17.4	17.9	18.4	18.4	18.4	17.9	17.4
90°	3.5	4.4	5.4	6.4	7.5	8.5	8.8	9.1	9.4	9.7	10.0
92.5°	12.5	13.0	13.4	13.9	14.4	14.8	15.1	15.3	15.5	15.8	15.8
95°	23.0	23.6	24.3	24.9	25.5	26.2	26.5	26.8	27.1	27.4	27.6
97.5°	35.8	36.3	36.8	37.2	37.7	38.2	38.6	39.0	39.3	39.7	39.9
100°	49.9	50.4	50.8	51.2	51.6	51.9	52.2	52.4	52.7	52.9	53.1
102.5°	64.9	65.3	65.8	66.4	66.9	67.5	67.7	68.0	68.2	68.4	68.5
105°	80.1	80.6	81.3	82.0	82.7	83.4	83.4	83.4	83.4	83.4	83.5
107.5°	98.2	98.4	98.7	99.0	99.3	99.7	99.9	100.1	100.4	100.6	100.7
110°	115.5	115.6	115.8	116.0	116.1	116.3	116.6	116.9	117.2	117.5	117.6



TEST NUMBER: P831643

CATALOG NUMBER: S123DIP-S775D365U835-4F0-1E-UDD-G1

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	132.8	132.9	132.9	132.9	132.9	132.9	133.3	133.7	134.1	134.4	134.6
115°	151.1	151.2	151.0	150.9	150.7	150.5	150.6	150.7	150.8	150.9	150.9
117.5°	168.5	168.5	168.3	168.2	168.0	167.9	167.9	167.9	167.9	167.9	167.7
120°	186.7	186.7	186.4	186.0	185.6	185.2	185.1	185.0	184.9	184.9	184.7
122.5°	203.4	203.5	203.3	203.2	203.0	202.8	202.6	202.4	202.1	201.9	201.7
125°	220.8	220.8	220.6	220.5	220.3	220.2	219.8	219.5	219.2	218.9	218.6
127.5°	238.0	238.1	238.0	237.8	237.6	237.5	237.0	236.5	236.1	235.6	235.2
130°	254.8	255.0	254.8	254.6	254.3	254.1	253.8	253.5	253.1	252.8	252.4
132.5°	271.1	271.3	271.2	271.0	270.9	270.7	270.3	269.9	269.5	269.1	268.7
135°	287.1	287.3	287.2	287.1	287.0	287.0	286.6	286.3	286.0	285.7	285.5
137.5°	302.0	302.3	302.5	302.7	303.0	303.2	302.8	302.4	302.0	301.6	301.3
140°	317.9	318.1	318.2	318.2	318.3	318.4	318.3	318.2	318.2	318.1	317.8
142.5°	332.3	332.6	332.8	332.9	333.1	333.2	333.2	333.1	333.0	332.9	332.7
145°	346.6	346.8	347.0	347.3	347.5	347.7	347.7	347.6	347.5	347.4	347.2
147.5°	360.3	360.6	360.8	361.0	361.3	361.5	361.5	361.5	361.5	361.5	361.3
150°	373.5	373.6	373.8	373.9	374.1	374.2	374.2	374.2	374.2	374.2	374.0
152.5°	385.1	385.2	385.3	385.4	385.5	385.5	385.7	385.9	386.0	386.2	386.1
155°	396.2	396.2	396.3	396.3	396.4	396.5	396.8	397.1	397.4	397.8	397.6
157.5°	406.1	406.1	406.2	406.2	406.3	406.4	406.7	407.0	407.3	407.7	407.6
160°	415.3	415.2	415.2	415.2	415.2	415.2	415.6	416.0	416.4	416.8	416.8
162.5°	423.5	423.4	423.5	423.6	423.6	423.7	424.1	424.5	424.9	425.3	425.2
165°	430.5	430.4	430.4	430.4	430.4	430.4	430.9	431.4	431.8	432.3	432.3
167.5°	436.2	436.1	436.2	436.3	436.4	436.4	436.9	437.4	437.9	438.3	438.3
170°	441.2	441.0	441.0	441.0	441.0	441.0	441.6	442.1	442.7	443.2	443.2
172.5°	445.1	444.9	444.9	444.9	444.9	444.9	445.4	445.9	446.3	446.8	446.8
175°	447.6	447.4	447.4	447.4	447.4	447.4	447.9	448.3	448.8	449.3	449.2
177.5°	449.0	448.8	448.8	448.8	448.8	448.8	449.3	449.7	450.2	450.7	450.7
180°	449.9	449.9	449.9	449.9	449.9	449.9	449.9	449.9	449.9	449.9	449.9



TEST NUMBER: P831643

CATALOG NUMBER: S123DIP-S775D365U835-4F0-1E-UDD-G1

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	2206.4	2206.4	2206.4	2206.4
2.5°	1961.1	1957.6	1943.2	1928.9
5°	1662.7	1650.4	1646.3	1642.2
7.5°	1452.8	1451.8	1430.3	1408.8
10°	1268.0	1269.5	1250.1	1230.6
12.5°	1135.9	1123.1	1121.6	1120.1
15°	1036.6	1024.9	1022.8	1020.8
17.5°	966.5	959.3	957.3	955.2
20°	913.3	909.2	905.6	902.0
22.5°	867.2	862.1	859.0	855.9
25°	822.6	818.0	817.0	816.0
27.5°	782.7	777.1	777.1	777.1
30°	744.8	741.3	739.7	738.2
32.5°	709.5	706.4	706.4	706.4
35°	676.2	674.7	672.7	670.6
37.5°	646.0	646.0	645.0	644.0
40°	616.9	618.4	618.4	618.4
42.5°	590.2	591.8	591.8	591.8
45°	562.6	565.2	566.2	567.2
47.5°	535.5	539.6	540.6	541.6
50°	508.8	511.9	512.4	512.9
52.5°	481.7	485.3	487.9	490.4
55°	453.0	456.6	458.2	459.7
57.5°	422.3	425.9	426.4	426.9
60°	388.5	392.1	393.2	394.2
62.5°	356.3	358.3	359.4	360.4
65°	319.4	322.5	324.6	326.6
67.5°	284.1	286.7	286.7	286.7
70°	244.7	245.7	247.3	248.8
72.5°	208.3	208.9	208.9	208.9
75°	170.0	171.0	171.5	172.0
77.5°	133.6	134.1	134.1	134.1
80°	97.8	97.3	97.3	97.3
82.5°	67.1	65.5	65.5	65.5
85°	38.4	37.9	38.4	38.9
87.5°	17.4	17.4	17.4	17.4
90°	10.1	10.3	10.4	10.6
92.5°	15.7	15.5	15.4	15.2
95°	27.6	27.6	27.6	27.6
97.5°	39.8	39.7	39.7	39.6
100°	53.2	53.4	53.6	53.7
102.5°	68.4	68.4	68.3	68.2
105°	83.6	83.8	84.0	84.1
107.5°	100.6	100.5	100.4	100.4
110°	117.4	117.3	117.1	117.0



TEST NUMBER: P831643

CATALOG NUMBER: S123DIP-S775D365U835-4F0-1E-UDD-G1

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
112.5°	134.6	134.6	134.6	134.6
115°	150.8	150.7	150.6	150.5
117.5°	167.5	167.3	167.0	166.8
120°	184.6	184.4	184.3	184.1
122.5°	201.4	201.2	201.0	200.7
125°	218.3	218.0	217.6	217.3
127.5°	234.9	234.6	234.3	233.9
130°	251.9	251.3	250.8	250.2
132.5°	268.3	267.9	267.6	267.2
135°	285.3	285.1	285.0	284.8
137.5°	301.1	300.9	300.6	300.4
140°	317.2	316.7	316.1	315.6
142.5°	332.3	331.9	331.5	331.1
145°	346.9	346.6	346.3	346.0
147.5°	360.8	360.3	359.9	359.4
150°	373.5	373.1	372.6	372.1
152.5°	385.7	385.3	384.9	384.5
155°	397.1	396.5	396.0	395.4
157.5°	407.1	406.6	406.2	405.7
160°	416.5	416.2	415.9	415.6
162.5°	424.7	424.1	423.6	423.0
165°	431.7	431.2	430.6	430.1
167.5°	437.9	437.4	436.9	436.4
170°	442.7	442.1	441.6	441.0
172.5°	446.2	445.7	445.1	444.6
175°	448.7	448.1	447.6	447.0
177.5°	450.1	449.6	449.0	448.5
180°	449.9	449.9	449.9	449.9



TEST NUMBER: P831643

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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	16.58	17.64	17.31	18.39	19.27	18.81	19.88	19.54	20.62	21.51
	3H	18.24	19.19	18.98	19.95	20.86	20.25	21.21	20.99	21.96	22.88
	4H	18.83	19.73	19.59	20.49	21.42	20.71	21.61	21.47	22.37	23.30
	6H	19.21	20.04	19.98	20.81	21.75	21.00	21.83	21.77	22.60	23.54
	8H	19.31	20.10	20.09	20.89	21.83	21.07	21.86	21.85	22.65	23.59
	12H	19.36	20.11	20.15	20.90	21.87	21.09	21.84	21.88	22.63	23.60
4H	2H	17.18	18.08	17.94	18.84	19.77	19.00	19.90	19.76	20.66	21.59
	3H	19.02	19.77	19.80	20.57	21.51	20.64	21.39	21.41	22.18	23.13
	4H	19.73	20.41	20.52	21.21	22.18	21.23	21.91	22.02	22.71	23.68
	6H	20.21	20.80	21.02	21.62	22.61	21.64	22.23	22.45	23.05	24.04
	8H	20.36	20.90	21.17	21.72	22.71	21.76	22.31	22.57	23.13	24.12
	12H	20.43	20.92	21.26	21.76	22.76	21.81	22.31	22.64	23.15	24.14
8H	4H	20.01	20.56	20.82	21.38	22.37	21.35	21.90	22.16	22.72	23.71
	6H	20.61	21.06	21.45	21.92	22.91	21.86	22.31	22.70	23.17	24.17
	8H	20.81	21.22	21.67	22.07	23.08	22.04	22.44	22.89	23.30	24.31
	12H	20.95	21.30	21.80	22.15	23.22	22.15	22.50	23.00	23.35	24.42
12H	4H	20.02	20.51	20.85	21.35	22.35	21.33	21.83	22.16	22.67	23.66
	6H	20.66	21.06	21.51	21.92	22.93	21.87	22.28	22.73	23.13	24.14
	8H	20.90	21.25	21.75	22.10	23.17	22.08	22.44	22.94	23.28	24.35