

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: P831681

Luminaire Tested: S123DIP-S775D585U930-4F0-1E-UDD-G

Issue Date: 05/03/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P831681  
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-S775D585U930-4F0-1E-UDD-G  
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 775 LUMENS PER FOOT, GRAZE OPTIC  
UPLIGHT 585 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: -

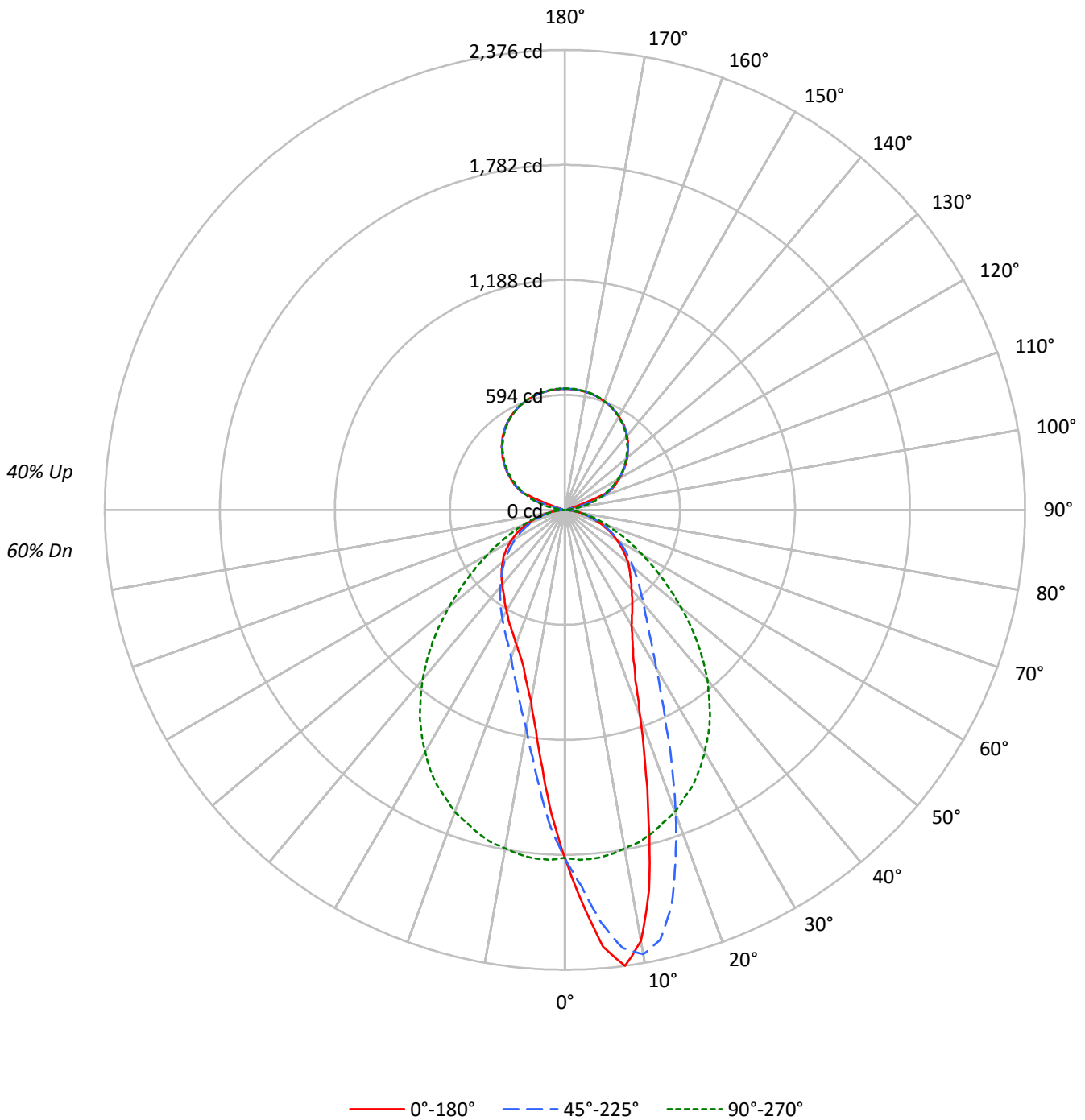
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4801.0 lumens  
Efficiency: N/A  
Efficacy: 116.8 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): 41.1  
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

TEST NUMBER: P831681

CATALOG NUMBER: S123DIP-S775D585U930-4F0-1E-UDD-G

### 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	102	102	102	102	89	89	89	77	77	77	66	66	66	66	66	66	60	
1	101	97	93	89	94	90	87	84	79	77	74	69	67	65	59	58	57	57	57	57	52	
2	92	85	79	74	86	80	75	70	70	66	63	61	58	56	53	51	49	49	49	49	45	
3	85	76	68	63	79	71	65	60	63	58	54	55	51	48	47	45	42	42	42	42	39	
4	78	67	60	54	73	64	57	51	56	51	47	49	45	42	43	40	37	37	37	37	34	
5	72	61	53	47	67	57	50	45	51	45	41	45	40	37	39	36	33	33	33	33	30	
6	67	55	47	41	62	52	45	40	46	40	36	41	36	33	36	32	30	30	30	30	27	
7	62	50	42	37	58	47	40	35	42	37	32	38	33	30	33	30	27	27	27	27	24	
8	58	46	38	33	54	43	36	32	39	33	29	35	30	27	31	27	24	24	24	24	22	
9	54	42	35	30	51	40	33	29	36	30	27	32	28	24	29	25	22	22	22	22	20	
10	51	39	32	27	48	37	31	26	33	28	24	30	26	22	27	23	21	21	21	21	19	

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

	0°	45°	90°	135°	180°
0°	19362	19362	19362	19362	19362
5°	24487	23112	19535	15743	14467
10°	24725	25473	19406	12550	10966
15°	18622	23650	19274	10628	9274
20°	12975	19137	19027	9294	8424
25°	9894	14718	18608	8551	7902
30°	8559	11692	17938	8025	7480
35°	7941	9872	17165	7645	7184
40°	7519	8855	16080	7284	7085
45°	7269	8196	14702	7001	7039
50°	7142	7675	13070	6745	7003
55°	6876	7293	11466	6501	7034
60°	6631	6882	9883	6271	6919
65°	6230	6495	8525	6026	6783
70°	5753	6002	7251	5621	6382
75°	5207	5382	6213	5224	5831
80°	4296	4711	4916	4556	4916
85°	3396	3816	3606	3866	3915

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 80°  
 Vertical Angle: 45°  
 Luminance: 16786 cd/sqm



TEST NUMBER: P831681

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	170.1	3.5
10°-20°	423.1	8.8
20°-30°	500.9	10.4
30°-40°	503.7	10.5
40°-50°	462.1	9.6
50°-60°	381.4	7.9
60°-70°	269.8	5.6
70°-80°	144.0	3.0
80°-90°	37.8	0.8
90°-100°	22.1	0.5
100°-110°	106.7	2.2
110°-120°	261.5	5.4
120°-130°	332.0	6.9
130°-140°	354.6	7.4
140°-150°	331.6	6.9
150°-160°	267.5	5.6
160°-170°	172.6	3.6
170°-180°	59.5	1.2
0°-30°	1094.1	22.8
0°-40°	1597.8	33.3
0°-60°	2441.3	50.9
0°-90°	2892.9	60.3
90°-120°	390.2	8.1
90°-150°	1408.4	29.3
90°-180°	1908.0	39.7
0°-180°	4801.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1799	1799	1799	1799	1799	
5°	2266	2139	1808	1457	1339	216
15°	1671	2122	1730	954	832	462
25°	833	1239	1567	720	665	393
35°	604	751	1306	582	547	380
45°	478	538	966	460	462	370
55°	366	389	611	346	375	328
65°	245	255	335	237	266	243
75°	125	129	149	126	140	132
85°	28	31	29	31	32	31
90°	14	11	0	11	14	8
95°	18	14	28	14	18	15
105°	20	102	139	102	20	43
115°	273	267	260	267	273	257
125°	374	372	366	372	374	334
135°	461	461	456	461	461	355
145°	532	531	526	531	532	332
155°	579	579	580	579	579	267
165°	610	610	612	610	610	172
175°	624	624	626	624	624	59
180°	626	626	626	626	626	



TEST NUMBER: P831681

CATALOG NUMBER: S123DIP-S775D585U930-4F0-1E-UDD-G

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1798.8	1798.8	1798.8	1798.8	1798.8	1798.8	1798.8	1798.8	1798.8	1798.8	1798.8
2.5°	2027.6	2025.5	2023.4	2012.9	2002.5	1997.5	1992.5	1977.5	1962.4	1945.7	1929.1
5°	2266.3	2272.1	2278.0	2271.3	2264.6	2244.2	2223.7	2196.6	2169.5	2139.0	2108.5
7.5°	2376.5	2379.8	2383.1	2379.0	2374.8	2369.4	2363.9	2339.7	2315.5	2284.2	2252.9
10°	2262.1	2269.6	2277.1	2293.4	2309.7	2328.1	2346.4	2343.1	2339.7	2330.6	2321.4
12.5°	2010.9	2020.0	2029.2	2061.8	2094.3	2136.1	2177.8	2213.7	2249.6	2274.6	2299.7
15°	1671.1	1696.6	1722.0	1751.7	1781.3	1842.7	1904.0	1979.6	2055.1	2122.3	2189.5
17.5°	1376.5	1386.1	1395.7	1427.4	1459.1	1536.3	1613.5	1700.8	1788.0	1899.4	2010.9
20°	1132.7	1141.5	1150.3	1192.0	1233.7	1294.2	1354.8	1452.8	1550.9	1670.7	1790.5
22.5°	951.6	965.4	979.1	1002.5	1025.9	1083.9	1141.9	1229.1	1316.4	1448.7	1581.0
25°	833.1	843.1	853.1	867.3	881.5	927.8	974.1	1045.9	1117.7	1239.2	1360.6
27.5°	752.1	756.3	760.4	774.6	788.8	818.9	848.9	910.7	972.5	1075.5	1178.6
30°	688.6	691.6	694.5	707.0	719.5	740.0	760.4	805.1	849.8	940.7	1031.7
32.5°	644.4	646.5	648.6	658.2	667.8	682.4	697.0	729.6	762.1	837.2	912.4
35°	604.3	605.6	606.8	613.9	621.0	631.9	642.7	667.4	692.0	751.3	810.5
37.5°	569.3	571.0	572.6	576.8	581.0	590.6	600.2	619.8	639.4	684.9	730.4
40°	535.1	538.0	540.9	543.8	546.7	554.7	562.6	577.6	592.7	630.2	667.8
42.5°	505.8	508.8	511.7	512.9	514.2	518.8	523.4	537.1	550.9	578.9	606.8
45°	477.5	478.7	480.0	481.2	482.5	486.2	490.0	502.1	514.2	538.4	562.6
47.5°	451.6	451.6	451.6	452.4	453.3	456.6	459.9	468.7	477.5	496.2	515.0
50°	426.5	426.5	426.5	425.3	424.0	426.1	428.2	434.9	441.6	458.3	475.0
52.5°	396.5	396.5	396.5	396.9	397.3	397.3	397.3	403.2	409.0	424.0	439.1
55°	366.4	368.1	369.8	368.5	367.3	368.1	368.9	372.7	376.5	388.6	400.7
57.5°	336.4	337.2	338.1	337.6	337.2	337.6	338.1	341.4	344.7	353.9	363.1
60°	308.0	308.0	308.0	307.2	306.3	307.2	308.0	309.7	311.4	319.7	328.0
62.5°	276.3	276.7	277.1	277.5	278.0	277.1	276.3	278.4	280.5	286.7	293.0
65°	244.6	245.0	245.4	246.7	247.9	247.1	246.2	248.3	250.4	255.0	259.6
67.5°	216.2	215.4	214.5	214.9	215.4	216.6	217.9	218.3	218.7	223.7	228.7
70°	182.8	183.6	184.5	184.1	183.6	184.1	184.5	185.7	187.0	190.7	194.5
72.5°	152.8	153.2	153.6	153.6	153.6	154.4	155.3	156.5	157.8	159.9	161.9
75°	125.2	125.2	125.2	126.0	126.9	127.3	127.7	127.7	127.7	129.4	131.1
77.5°	95.2	97.2	99.3	98.9	98.5	99.3	100.2	101.4	102.7	103.5	104.3
80°	69.3	69.3	69.3	69.7	70.1	71.4	72.6	73.5	74.3	76.0	77.6
82.5°	44.2	44.7	45.1	46.3	47.6	48.4	49.2	50.5	51.8	51.8	51.8
85°	27.5	26.7	25.9	26.7	27.5	28.4	29.2	29.6	30.1	30.9	31.7
87.5°	13.4	13.4	13.4	13.4	13.4	13.8	14.2	14.2	14.2	14.2	14.2
90°	14.0	13.7	13.5	13.3	13.1	12.8	12.4	12.0	11.6	11.2	9.8
92.5°	15.8	15.7	15.6	15.5	15.4	15.0	14.3	13.5	12.8	12.1	11.2
95°	17.7	17.7	17.7	17.7	17.7	17.3	16.6	15.9	15.1	14.4	13.3
97.5°	19.1	19.0	18.9	18.8	18.7	18.2	17.4	16.5	15.7	14.9	20.2
100°	19.5	19.4	19.3	19.2	19.1	18.7	17.8	17.0	16.2	15.3	31.5
102.5°	20.0	19.8	19.6	19.4	19.2	20.8	24.2	27.6	31.0	34.4	52.4
105°	20.5	20.3	20.0	19.8	19.6	28.7	47.0	65.3	83.5	101.8	111.1
107.5°	48.4	61.9	75.4	89.0	102.5	117.2	133.1	149.1	165.0	180.9	179.3
110°	127.9	142.7	157.4	172.2	187.0	196.1	199.5	202.9	206.3	209.7	208.6



TEST NUMBER: P831681

CATALOG NUMBER: S123DIP-S775D585U930-4F0-1E-UDD-G

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	242.3	242.5	242.7	242.9	243.1	242.7	241.8	240.9	239.9	239.0	237.9
115°	273.4	273.0	272.6	272.2	271.8	271.0	270.0	269.0	267.9	266.9	266.0
117.5°	298.5	298.4	298.3	298.2	298.1	297.7	296.8	296.0	295.2	294.4	293.8
120°	324.6	324.6	324.6	324.6	324.6	324.2	323.3	322.5	321.7	320.9	320.5
122.5°	350.2	350.0	349.9	349.8	349.7	349.4	348.9	348.4	347.9	347.4	346.9
125°	373.9	373.7	373.5	373.2	373.0	372.8	372.6	372.4	372.2	372.0	371.6
127.5°	397.1	397.3	397.5	397.7	397.9	397.9	397.6	397.3	397.0	396.7	396.1
130°	419.4	419.6	419.9	420.1	420.3	420.2	419.7	419.3	418.9	418.5	418.1
132.5°	439.9	440.2	440.5	440.8	441.1	441.1	440.7	440.3	439.8	439.4	439.1
135°	460.8	461.1	461.4	461.8	462.1	462.1	461.8	461.4	461.1	460.8	460.4
137.5°	480.8	481.0	481.2	481.4	481.6	481.5	481.0	480.5	479.9	479.4	479.2
140°	498.5	498.7	498.9	499.1	499.3	499.2	498.8	498.4	498.0	497.6	497.3
142.5°	514.8	515.1	515.4	515.7	516.0	516.0	515.7	515.4	515.1	514.8	514.5
145°	531.5	531.5	531.5	531.5	531.5	531.4	531.2	531.0	530.8	530.6	530.4
147.5°	543.6	544.1	544.6	545.1	545.7	545.8	545.6	545.4	545.2	545.0	544.8
150°	557.5	557.9	558.2	558.5	558.8	558.8	558.6	558.4	558.2	558.0	557.8
152.5°	568.7	569.2	569.7	570.3	570.8	570.8	570.4	570.0	569.6	569.2	569.1
155°	578.9	579.6	580.2	580.8	581.4	581.5	581.0	580.4	579.9	579.4	579.3
157.5°	587.8	588.6	589.4	590.3	591.1	591.2	590.6	589.9	589.3	588.7	588.8
160°	596.1	596.9	597.6	598.3	599.0	599.1	598.5	597.8	597.2	596.6	596.7
162.5°	604.0	604.7	605.3	605.9	606.5	606.5	605.8	605.0	604.3	603.6	603.7
165°	610.1	610.8	611.5	612.3	613.0	612.9	612.1	611.3	610.5	609.6	609.7
167.5°	614.7	615.6	616.4	617.2	618.0	618.0	617.2	616.4	615.6	614.7	614.7
170°	618.9	619.8	620.6	621.4	622.2	622.2	621.4	620.6	619.8	618.9	618.9
172.5°	621.3	622.2	623.1	624.0	625.0	625.0	624.2	623.4	622.5	621.7	621.6
175°	623.6	624.4	625.2	626.1	626.9	626.9	626.2	625.5	624.8	624.0	623.9
177.5°	624.0	625.1	626.1	627.1	628.2	628.3	627.5	626.6	625.8	625.0	624.9
180°	625.9	625.9	625.9	625.9	625.9	625.9	625.9	625.9	625.9	625.9	625.9



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CATALOG NUMBER: S123DIP-S775D585U930-4F0-1E-UDD-G

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1798.8	1798.8	1798.8	1798.8	1798.8	1798.8	1798.8	1798.8	1798.8	1798.8	1798.8
2.5°	1924.0	1919.0	1900.7	1882.3	1861.4	1840.6	1825.1	1809.7	1786.7	1763.8	1745.0
5°	2085.1	2061.8	2023.0	1984.1	1931.6	1879.0	1843.5	1808.0	1760.4	1712.9	1674.9
7.5°	2212.9	2172.8	2118.5	2064.3	1995.4	1926.5	1861.4	1796.3	1723.7	1651.1	1591.8
10°	2294.2	2267.1	2204.5	2141.9	2049.7	1957.4	1866.4	1775.5	1682.0	1588.5	1510.0
12.5°	2302.2	2304.7	2247.1	2189.5	2085.1	1980.8	1870.2	1759.6	1641.9	1524.2	1432.8
15°	2232.5	2275.5	2243.7	2212.0	2106.8	2001.7	1865.6	1729.6	1593.9	1458.3	1352.7
17.5°	2103.1	2195.3	2199.9	2204.5	2099.3	1994.2	1843.5	1692.8	1539.2	1385.6	1274.6
20°	1926.5	2062.6	2109.4	2156.1	2070.5	1985.0	1823.0	1661.1	1489.2	1317.2	1200.8
22.5°	1746.2	1911.5	1997.1	2082.6	2019.2	1955.8	1783.4	1611.0	1429.5	1247.9	1129.8
25°	1540.9	1721.2	1852.7	1984.1	1945.3	1906.5	1736.6	1566.8	1373.5	1180.3	1059.7
27.5°	1361.9	1545.1	1703.7	1862.3	1853.9	1845.6	1677.0	1508.4	1310.5	1112.7	996.2
30°	1202.4	1373.1	1550.5	1727.9	1748.3	1768.8	1606.0	1443.2	1245.0	1046.7	934.5
32.5°	1061.4	1210.4	1400.7	1591.0	1631.1	1671.1	1524.2	1377.3	1181.1	985.0	876.9
35°	945.7	1081.0	1271.3	1461.6	1511.7	1561.8	1434.1	1306.3	1115.2	924.0	821.0
37.5°	843.5	956.6	1142.3	1328.1	1389.4	1450.8	1336.4	1222.0	1043.0	863.9	769.2
40°	758.8	849.8	1020.5	1191.2	1262.1	1333.1	1238.7	1144.4	974.5	804.7	717.4
42.5°	687.8	768.8	923.6	1078.5	1146.5	1214.5	1134.8	1055.1	904.0	752.9	673.2
45°	627.3	692.0	832.6	973.3	1038.0	1102.7	1034.2	965.8	832.6	699.5	625.2
47.5°	570.5	626.0	746.2	866.4	924.0	981.6	928.2	874.8	762.1	649.4	582.2
50°	519.6	564.3	669.5	774.6	824.7	874.8	827.6	780.5	687.8	595.2	536.7
52.5°	475.4	511.7	599.8	687.8	730.8	773.8	733.3	692.8	619.4	545.9	495.0
55°	431.6	462.4	538.8	615.2	644.4	673.6	642.3	611.0	551.8	492.5	449.5
57.5°	390.7	418.2	480.8	543.4	565.9	588.5	560.1	531.7	487.1	442.4	406.5
60°	350.6	373.1	425.3	477.5	491.2	505.0	482.1	459.1	427.8	396.5	364.4
62.5°	313.4	333.9	372.7	411.5	420.7	429.9	412.4	394.8	371.0	347.2	322.2
65°	275.0	290.5	322.2	353.9	359.8	365.6	350.2	334.7	316.8	298.8	280.5
67.5°	239.6	250.4	276.3	302.2	302.6	303.0	290.5	278.0	267.9	257.9	243.3
70°	204.9	215.4	232.5	249.6	250.0	250.4	240.4	230.4	222.9	215.4	204.5
72.5°	169.4	177.0	189.9	202.8	202.0	201.2	194.9	188.6	182.8	177.0	169.0
75°	137.3	143.6	152.3	161.1	158.6	156.1	152.8	149.4	144.4	139.4	134.4
77.5°	108.1	111.9	116.9	121.9	120.2	118.5	115.6	112.7	108.9	105.2	103.1
80°	79.3	81.0	84.3	87.6	86.8	86.0	82.6	79.3	78.5	77.6	74.7
82.5°	53.8	55.9	56.8	57.6	57.2	56.8	54.3	51.8	50.9	50.1	49.7
85°	32.1	32.6	33.0	33.4	32.1	30.9	30.1	29.2	29.2	29.2	28.8
87.5°	14.6	15.0	15.0	15.0	14.6	14.2	13.4	12.5	12.9	13.4	13.4
90°	8.5	7.1	5.8	4.6	3.6	2.5	1.5	0.5	1.5	2.5	3.6
92.5°	10.2	9.3	8.4	8.2	8.8	9.5	10.1	10.7	10.1	9.5	8.8
95°	12.1	11.0	9.9	11.4	15.7	19.9	24.1	28.4	24.1	19.9	15.7
97.5°	25.4	30.7	36.0	40.0	42.9	45.8	48.7	51.6	48.7	45.8	42.9
100°	47.6	63.7	79.8	86.9	84.8	82.7	80.7	78.6	80.7	82.7	84.8
102.5°	70.4	88.4	106.3	114.7	113.3	112.0	110.6	109.3	110.6	112.0	113.3
105°	120.4	129.7	139.0	143.1	142.0	140.8	139.7	138.6	139.7	140.8	142.0
107.5°	177.8	176.2	174.7	173.4	172.5	171.6	170.7	169.7	170.7	171.6	172.5
110°	207.4	206.3	205.2	204.2	203.4	202.5	201.7	200.9	201.7	202.5	203.4





TEST NUMBER: P831681

CATALOG NUMBER: S123DIP-S775D585U930-4F0-1E-UDD-G

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	236.7	235.6	234.5	233.5	232.8	232.1	231.4	230.6	231.4	232.1	232.8
115°	265.1	264.1	263.2	262.4	261.8	261.2	260.6	259.9	260.6	261.2	261.8
117.5°	293.3	292.8	292.3	291.7	290.9	290.2	289.5	288.8	289.5	290.2	290.9
120°	320.2	319.9	319.6	319.0	318.1	317.1	316.2	315.3	316.2	317.1	318.1
122.5°	346.5	346.1	345.7	345.1	344.4	343.7	343.0	342.2	343.0	343.7	344.4
125°	371.2	370.8	370.4	369.7	368.9	368.1	367.3	366.4	367.3	368.1	368.9
127.5°	395.6	395.1	394.6	393.9	393.1	392.3	391.4	390.6	391.4	392.3	393.1
130°	417.7	417.3	416.9	416.2	415.4	414.6	413.8	412.9	413.8	414.6	415.4
132.5°	438.8	438.5	438.2	437.6	436.8	436.0	435.1	434.3	435.1	436.0	436.8
135°	460.0	459.6	459.2	458.7	458.0	457.4	456.8	456.2	456.8	457.4	458.0
137.5°	479.0	478.8	478.6	478.1	477.3	476.4	475.6	474.8	475.6	476.4	477.3
140°	496.9	496.6	496.3	495.9	495.2	494.6	494.0	493.4	494.0	494.6	495.2
142.5°	514.1	513.8	513.5	513.1	512.4	511.8	511.2	510.6	511.2	511.8	512.4
145°	530.2	530.0	529.7	529.3	528.6	527.8	527.1	526.4	527.1	527.8	528.6
147.5°	544.6	544.4	544.2	543.8	543.3	542.8	542.3	541.7	542.3	542.8	543.3
150°	557.6	557.4	557.2	556.9	556.6	556.3	556.0	555.7	556.0	556.3	556.6
152.5°	569.0	568.9	568.8	568.7	568.6	568.4	568.3	568.2	568.3	568.4	568.6
155°	579.2	579.1	579.0	579.0	579.2	579.5	579.7	579.9	579.7	579.5	579.2
157.5°	588.9	589.0	589.1	589.2	589.2	589.2	589.2	589.2	589.2	589.2	589.2
160°	596.8	596.9	597.0	597.1	597.2	597.3	597.4	597.5	597.4	597.3	597.2
162.5°	603.8	603.9	604.0	604.2	604.5	604.8	605.1	605.4	605.1	604.8	604.5
165°	609.8	609.9	610.0	610.2	610.6	610.9	611.2	611.5	611.2	610.9	610.6
167.5°	614.7	614.7	614.7	614.9	615.4	615.8	616.2	616.6	616.2	615.8	615.4
170°	618.9	618.9	618.9	619.1	619.5	620.0	620.4	620.8	620.4	620.0	619.5
172.5°	621.5	621.4	621.3	621.5	622.0	622.5	623.1	623.6	623.1	622.5	622.0
175°	623.8	623.7	623.6	623.8	624.4	624.9	625.4	625.9	625.4	624.9	624.4
177.5°	624.8	624.7	624.6	624.8	625.3	625.8	626.3	626.8	626.3	625.8	625.3
180°	625.9	625.9	625.9	625.9	625.9	625.9	625.9	625.9	625.9	625.9	625.9



TEST NUMBER: P831681

CATALOG NUMBER: S123DIP-S775D585U930-4F0-1E-UDD-G

**CANDELA DISTRIBUTION (continued):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1798.8	1798.8	1798.8	1798.8	1798.8	1798.8	1798.8	1798.8	1798.8	1798.8	1798.8
2.5°	1726.2	1709.9	1693.7	1681.1	1668.6	1647.3	1626.0	1621.0	1616.0	1608.9	1601.8
5°	1636.9	1596.8	1556.8	1520.9	1485.0	1457.0	1429.1	1410.7	1392.3	1379.0	1365.6
7.5°	1532.6	1472.5	1412.4	1369.8	1327.2	1286.7	1246.2	1233.3	1220.4	1202.8	1185.3
10°	1431.6	1365.2	1298.8	1243.3	1187.8	1148.2	1108.5	1092.7	1076.8	1054.7	1032.6
12.5°	1341.4	1268.8	1196.2	1140.2	1084.3	1045.9	1007.5	984.6	961.6	949.1	936.6
15°	1247.1	1169.5	1091.8	1040.1	988.3	953.7	919.0	899.0	879.0	866.9	854.8
17.5°	1163.6	1086.8	1010.0	960.4	910.7	879.0	847.2	829.7	812.2	803.0	793.8
20°	1084.3	1009.2	934.1	885.6	837.2	811.4	785.5	774.2	762.9	755.4	747.9
22.5°	1011.7	937.8	863.9	822.6	781.3	760.4	739.6	731.6	723.7	717.4	711.2
25°	939.1	873.1	807.2	772.1	737.1	720.0	702.8	694.9	687.0	680.7	674.5
27.5°	879.8	816.8	753.8	723.7	693.7	680.3	666.9	660.7	654.4	648.6	642.7
30°	822.2	765.9	709.5	683.6	657.8	645.7	633.6	627.3	621.0	615.6	610.2
32.5°	768.8	720.4	672.0	648.2	624.4	614.4	604.3	596.8	589.3	585.1	581.0
35°	717.9	674.5	631.1	611.4	591.8	581.8	571.8	565.5	559.3	555.9	552.6
37.5°	674.5	635.6	596.8	578.0	559.3	549.7	540.1	534.6	529.2	528.0	526.7
40°	630.2	596.8	563.4	545.1	526.7	518.4	510.0	506.7	503.3	502.5	501.7
42.5°	593.5	560.9	528.4	511.7	495.0	487.9	480.8	479.1	477.5	478.7	480.0
45°	550.9	523.8	496.7	481.2	465.8	459.9	454.1	452.8	451.6	454.1	456.6
47.5°	515.0	490.0	464.9	450.3	435.7	431.6	427.4	427.0	426.5	429.9	433.2
50°	478.3	454.1	429.9	418.2	406.5	402.8	399.0	400.3	401.5	406.9	412.4
52.5°	444.1	421.5	399.0	388.1	377.3	374.8	372.3	375.2	378.1	384.0	389.8
55°	406.5	386.1	365.6	357.3	348.9	346.4	343.9	349.8	355.6	361.0	366.4
57.5°	370.6	352.7	334.7	327.2	319.7	319.3	318.9	324.3	329.7	335.6	341.4
60°	332.2	317.2	302.2	296.3	290.5	291.3	292.2	298.4	304.7	309.3	313.9
62.5°	297.2	284.6	272.1	266.7	261.3	263.4	265.4	271.7	278.0	283.4	288.8
65°	262.1	251.7	241.2	237.5	233.7	236.6	239.6	245.0	250.4	254.2	257.9
67.5°	228.7	220.0	211.2	208.3	205.3	208.3	211.2	216.6	222.0	225.8	229.5
70°	193.7	186.6	179.5	177.4	175.3	178.6	182.0	186.6	191.2	194.9	198.7
72.5°	161.1	155.7	150.3	149.8	149.4	152.3	155.3	159.9	164.4	166.9	169.4
75°	129.4	126.5	123.5	123.1	122.7	125.6	128.5	131.1	133.6	135.6	137.7
77.5°	101.0	98.5	96.0	96.4	96.8	98.9	101.0	103.5	106.0	107.3	108.5
80°	71.8	71.0	70.1	71.0	71.8	73.5	75.1	76.8	78.5	79.3	80.1
82.5°	49.2	48.4	47.6	48.8	50.1	51.3	52.6	53.8	55.1	55.5	55.9
85°	28.4	29.6	30.9	30.9	30.9	31.3	31.7	32.1	32.6	32.1	31.7
87.5°	13.4	13.8	14.2	14.2	14.2	14.6	15.0	15.0	15.0	14.6	14.2
90°	4.6	5.8	7.1	8.5	9.8	11.2	11.6	12.0	12.4	12.8	13.1
92.5°	8.2	8.4	9.3	10.2	11.2	12.1	12.8	13.5	14.3	15.0	15.4
95°	11.4	9.9	11.0	12.1	13.3	14.4	15.1	15.9	16.6	17.3	17.7
97.5°	40.0	36.0	30.7	25.4	20.2	14.9	15.7	16.5	17.4	18.2	18.7
100°	86.9	79.8	63.7	47.6	31.5	15.3	16.2	17.0	17.8	18.7	19.1
102.5°	114.7	106.3	88.4	70.4	52.4	34.4	31.0	27.6	24.2	20.8	19.2
105°	143.1	139.0	129.7	120.4	111.1	101.8	83.5	65.3	47.0	28.7	19.6
107.5°	173.4	174.7	176.2	177.8	179.3	180.9	165.0	149.1	133.1	117.2	102.5
110°	204.2	205.2	206.3	207.4	208.6	209.7	206.3	202.9	199.5	196.1	187.0



TEST NUMBER: P831681

CATALOG NUMBER: S123DIP-S775D585U930-4F0-1E-UDD-G

**CANDELA DISTRIBUTION (continued):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	233.5	234.5	235.6	236.7	237.9	239.0	239.9	240.9	241.8	242.7	243.1
115°	262.4	263.2	264.1	265.1	266.0	266.9	267.9	269.0	270.0	271.0	271.8
117.5°	291.7	292.3	292.8	293.3	293.8	294.4	295.2	296.0	296.8	297.7	298.1
120°	319.0	319.6	319.9	320.2	320.5	320.9	321.7	322.5	323.3	324.2	324.6
122.5°	345.1	345.7	346.1	346.5	346.9	347.4	347.9	348.4	348.9	349.4	349.7
125°	369.7	370.4	370.8	371.2	371.6	372.0	372.2	372.4	372.6	372.8	373.0
127.5°	393.9	394.6	395.1	395.6	396.1	396.7	397.0	397.3	397.6	397.9	397.9
130°	416.2	416.9	417.3	417.7	418.1	418.5	418.9	419.3	419.7	420.2	420.3
132.5°	437.6	438.2	438.5	438.8	439.1	439.4	439.8	440.3	440.7	441.1	441.1
135°	458.7	459.2	459.6	460.0	460.4	460.8	461.1	461.4	461.8	462.1	462.1
137.5°	478.1	478.6	478.8	479.0	479.2	479.4	479.9	480.5	481.0	481.5	481.6
140°	495.9	496.3	496.6	496.9	497.3	497.6	498.0	498.4	498.8	499.2	499.3
142.5°	513.1	513.5	513.8	514.1	514.5	514.8	515.1	515.4	515.7	516.0	516.0
145°	529.3	529.7	530.0	530.2	530.4	530.6	530.8	531.0	531.2	531.4	531.5
147.5°	543.8	544.2	544.4	544.6	544.8	545.0	545.2	545.4	545.6	545.8	545.7
150°	556.9	557.2	557.4	557.6	557.8	558.0	558.2	558.4	558.6	558.8	558.8
152.5°	568.7	568.8	568.9	569.0	569.1	569.2	569.6	570.0	570.4	570.8	570.8
155°	579.0	579.0	579.1	579.2	579.3	579.4	579.9	580.4	581.0	581.5	581.4
157.5°	589.2	589.1	589.0	588.9	588.8	588.7	589.3	589.9	590.6	591.2	591.1
160°	597.1	597.0	596.9	596.8	596.7	596.6	597.2	597.8	598.5	599.1	599.0
162.5°	604.2	604.0	603.9	603.8	603.7	603.6	604.3	605.0	605.8	606.5	606.5
165°	610.2	610.0	609.9	609.8	609.7	609.6	610.5	611.3	612.1	612.9	613.0
167.5°	614.9	614.7	614.7	614.7	614.7	614.7	615.6	616.4	617.2	618.0	618.0
170°	619.1	618.9	618.9	618.9	618.9	618.9	619.8	620.6	621.4	622.2	622.2
172.5°	621.5	621.3	621.4	621.5	621.6	621.7	622.5	623.4	624.2	625.0	625.0
175°	623.8	623.6	623.7	623.8	623.9	624.0	624.8	625.5	626.2	626.9	626.9
177.5°	624.8	624.6	624.7	624.8	624.9	625.0	625.8	626.6	627.5	628.3	628.2
180°	625.9	625.9	625.9	625.9	625.9	625.9	625.9	625.9	625.9	625.9	625.9



TEST NUMBER: P831681

CATALOG NUMBER: S123DIP-S775D585U930-4F0-1E-UDD-G

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
0°	1798.8	1798.8	1798.8	1798.8
2.5°	1598.9	1596.0	1584.3	1572.6
5°	1355.6	1345.6	1342.2	1338.9
7.5°	1184.5	1183.6	1166.1	1148.6
10°	1033.8	1035.1	1019.2	1003.3
12.5°	926.1	915.7	914.4	913.2
15°	845.2	835.6	833.9	832.2
17.5°	788.0	782.1	780.5	778.8
20°	744.6	741.2	738.3	735.4
22.5°	707.0	702.8	700.3	697.8
25°	670.7	666.9	666.1	665.3
27.5°	638.1	633.6	633.6	633.6
30°	607.3	604.3	603.1	601.8
32.5°	578.5	576.0	576.0	576.0
35°	551.3	550.1	548.4	546.7
37.5°	526.7	526.7	525.9	525.0
40°	502.9	504.2	504.2	504.2
42.5°	481.2	482.5	482.5	482.5
45°	458.7	460.8	461.6	462.4
47.5°	436.6	439.9	440.7	441.6
50°	414.9	417.4	417.8	418.2
52.5°	392.7	395.7	397.7	399.8
55°	369.4	372.3	373.5	374.8
57.5°	344.3	347.2	347.7	348.1
60°	316.8	319.7	320.5	321.4
62.5°	290.5	292.2	293.0	293.8
65°	260.4	262.9	264.6	266.3
67.5°	231.6	233.7	233.7	233.7
70°	199.5	200.3	201.6	202.8
72.5°	169.9	170.3	170.3	170.3
75°	138.6	139.4	139.8	140.2
77.5°	108.9	109.3	109.3	109.3
80°	79.7	79.3	79.3	79.3
82.5°	54.7	53.4	53.4	53.4
85°	31.3	30.9	31.3	31.7
87.5°	14.2	14.2	14.2	14.2
90°	13.3	13.5	13.7	14.0
92.5°	15.5	15.6	15.7	15.8
95°	17.7	17.7	17.7	17.7
97.5°	18.8	18.9	19.0	19.1
100°	19.2	19.3	19.4	19.5
102.5°	19.4	19.6	19.8	20.0
105°	19.8	20.0	20.3	20.5
107.5°	89.0	75.4	61.9	48.4
110°	172.2	157.4	142.7	127.9



TEST NUMBER: P831681

CATALOG NUMBER: S123DIP-S775D585U930-4F0-1E-UDD-G

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
112.5°	242.9	242.7	242.5	242.3
115°	272.2	272.6	273.0	273.4
117.5°	298.2	298.3	298.4	298.5
120°	324.6	324.6	324.6	324.6
122.5°	349.8	349.9	350.0	350.2
125°	373.2	373.5	373.7	373.9
127.5°	397.7	397.5	397.3	397.1
130°	420.1	419.9	419.6	419.4
132.5°	440.8	440.5	440.2	439.9
135°	461.8	461.4	461.1	460.8
137.5°	481.4	481.2	481.0	480.8
140°	499.1	498.9	498.7	498.5
142.5°	515.7	515.4	515.1	514.8
145°	531.5	531.5	531.5	531.5
147.5°	545.1	544.6	544.1	543.6
150°	558.5	558.2	557.9	557.5
152.5°	570.3	569.7	569.2	568.7
155°	580.8	580.2	579.6	578.9
157.5°	590.3	589.4	588.6	587.8
160°	598.3	597.6	596.9	596.1
162.5°	605.9	605.3	604.7	604.0
165°	612.3	611.5	610.8	610.1
167.5°	617.2	616.4	615.6	614.7
170°	621.4	620.6	619.8	618.9
172.5°	624.0	623.1	622.2	621.3
175°	626.1	625.2	624.4	623.6
177.5°	627.1	626.1	625.1	624.0
180°	625.9	625.9	625.9	625.9



TEST NUMBER: P831681

CATALOG NUMBER: S123DIP-S775D585U930-4F0-1E-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	14.77	15.69	15.64	16.57	17.69	17.01	17.92	17.88	18.81	19.93
	3H	16.42	17.24	17.31	18.14	19.29	18.44	19.26	19.32	20.15	21.30
	4H	17.00	17.78	17.90	18.68	19.84	18.89	19.66	19.79	20.57	21.72
	6H	17.38	18.09	18.29	19.00	20.17	19.17	19.88	20.08	20.79	21.96
	8H	17.47	18.15	18.39	19.08	20.25	19.23	19.91	20.15	20.84	22.01
	12H	17.52	18.17	18.45	19.09	20.28	19.25	19.90	20.18	20.82	22.01
4H	2H	15.35	16.13	16.26	17.03	18.19	17.18	17.95	18.08	18.86	20.01
	3H	17.19	17.83	18.10	18.77	19.94	18.80	19.45	19.72	20.38	21.55
	4H	17.89	18.47	18.81	19.40	20.60	19.39	19.98	20.31	20.90	22.10
	6H	18.37	18.87	19.31	19.82	21.02	19.80	20.30	20.74	21.25	22.45
	8H	18.50	18.98	19.44	19.92	21.13	19.91	20.38	20.85	21.33	22.54
	12H	18.57	19.00	19.53	19.96	21.18	19.96	20.38	20.92	21.35	22.56
8H	4H	18.16	18.63	19.10	19.58	20.79	19.50	19.97	20.44	20.92	22.13
	6H	18.75	19.14	19.72	20.13	21.34	20.00	20.39	20.97	21.38	22.59
	8H	18.96	19.30	19.93	20.28	21.51	20.18	20.53	21.16	21.51	22.73
	12H	19.08	19.38	20.06	20.36	21.63	20.29	20.59	21.27	21.56	22.84
12H	4H	18.16	18.59	19.12	19.55	20.77	19.48	19.90	20.44	20.87	22.08
	6H	18.80	19.14	19.78	20.12	21.35	20.02	20.36	20.99	21.34	22.57
	8H	19.04	19.34	20.02	20.31	21.59	20.22	20.52	21.20	21.49	22.77