

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: P832484

Luminaire Tested: S123RDP-S775D950-4F0-1E-UDD-G

Issue Date: 05/03/2024

Tested By:

Approved By:



NVLAP Lab Code: 200050-0

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Test Information

Test Method: LM-79-2019
 Report Number: P832484
 Test Lab: INNOVATION CENTER
 Issue Date: 05/03/2024
 Manufacturer: COOPER LIGHTING SOLUTIONS
 Product Line: NEO-RAY
 Catalog Number: S123RDP-S775D950-4F0-1E-UDD-G
 Description: DEFINE 3 DIRECT PENDANT LED LUMINAIRE
 DOWNLIGHT 775 LUMENS PER FOOT, GRAZE OPTIC

Light Source: -
 Ballast/Driver: -

Summary

Lumens per Lamp: N/A
 Luminaire Lumens: 3157.7 lumens
 Efficiency: N/A
 Efficacy: 121.9 lumens/watt
 Spacing Criteria (0/90/45): 0.55 / 1.17 / 0.8
 Luminous Opening: Rectangular (W 4' x L: 0.25' x H: 0')
 CIE Type: Direct

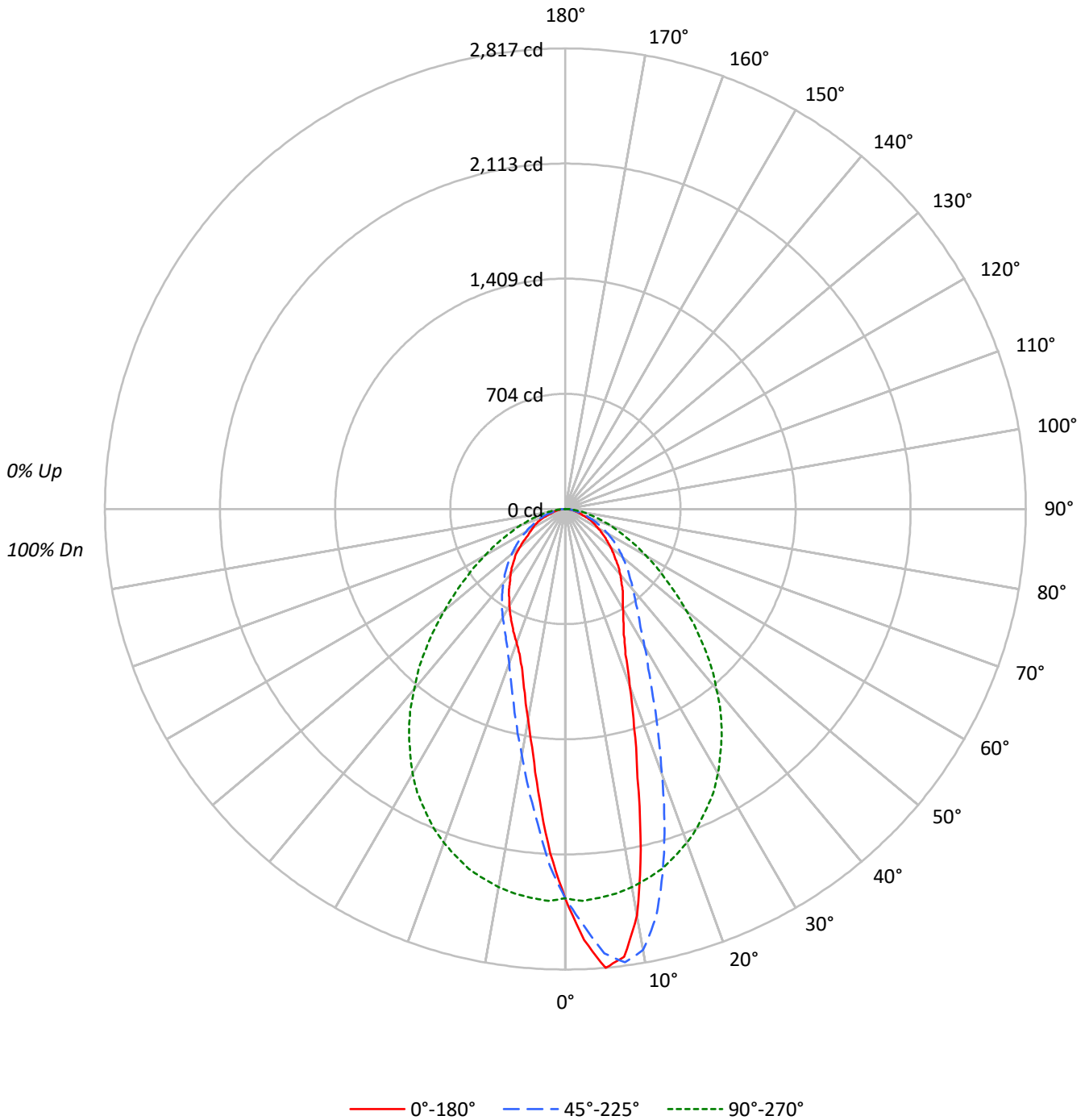
Input Watts (W): 25.9
 Input Voltage (V): 120
 Input Current (Ain): NR
 Voltage Rise (V): NR
 Power Factor: NR
 Total Harmonic Distortion (THDi): NR
 Frequency (hertz): 60
 Stabilization Time: NR
 Operation Time: NR
 Ambient Temperature (°C): NR
 Test Distance: 24 FT

Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	P3	10/30/2015	4/30/2016
Power Meter	IN0214	1/12/2016	1/12/2017
AC Power Source	IN0062	1/12/2016	1/12/2017
DC Power Supply	--	--	--
Room Thermometer	IN0145	1/13/2016	1/13/2017

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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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100	100	100	
1	111	107	103	100	108	104	101	98	100	97	95	96	94	92	93	91	89	87	87	87	87	
2	102	95	89	84	100	93	88	83	90	85	81	87	83	80	84	81	78	76	76	76	76	
3	94	85	78	73	92	84	77	72	81	75	71	78	74	70	76	72	69	67	67	67	67	
4	88	77	69	64	85	76	69	63	73	67	62	71	66	62	69	65	61	59	59	59	59	
5	82	70	62	56	80	69	62	56	67	61	56	65	60	55	63	58	54	53	53	53	53	
6	76	64	56	51	74	63	56	50	62	55	50	60	54	50	59	53	49	47	47	47	47	
7	71	59	51	46	70	58	51	46	57	50	45	56	50	45	54	49	45	43	43	43	43	
8	67	55	47	42	65	54	47	42	53	46	41	52	46	41	51	45	41	39	39	39	39	
9	63	51	43	38	62	50	43	38	49	43	38	48	42	38	47	42	38	36	36	36	36	
10	60	47	40	35	58	47	40	35	46	40	35	45	39	35	44	39	35	33	33	33	33	

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	25635	25635	25635	25635	25635
5°	30439	29469	25797	20854	19360
10°	27578	29932	25668	16709	14334
15°	18989	25664	25397	13657	11339
20°	13210	19759	24888	11515	9966
25°	10067	15060	24145	10234	9185
30°	8763	12040	23218	9503	8508
35°	8046	10156	21904	8885	7891
40°	7340	9070	20183	8280	7326
45°	6629	8295	18328	7707	6763
50°	6017	7653	16139	7145	6067
55°	5442	7028	14037	6596	5204
60°	4876	6389	12193	5991	4919
65°	4500	5670	10496	5384	4651
70°	3657	4900	9158	4872	3780
75°	3206	3897	7756	4042	3331
80°	2907	3298	6354	3391	3149
85°	2655	2890	4829	3075	2890

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 80°
 Vertical Angle: 45°
 Luminance: 19339 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	217.1	6.9
10°-20°	502.3	15.9
20°-30°	576.3	18.3
30°-40°	568.1	18.0
40°-50°	501.0	15.9
50°-60°	385.4	12.2
60°-70°	253.4	8.0
70°-80°	123.1	3.9
80°-90°	31.0	1.0
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1295.8	41.0
0°-40°	1863.8	59.0
0°-60°	2750.2	87.1
0°-90°	3157.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3157.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2382	2382	2382	2382	2382	
5°	2817	2727	2388	1930	1792	257
15°	1704	2303	2279	1226	1018	481
25°	848	1268	2033	862	773	400
35°	612	773	1667	676	600	382
45°	436	545	1204	506	444	338
55°	290	374	748	352	277	260
65°	177	223	412	211	183	173
75°	77	94	186	97	80	83
85°	22	23	39	25	23	24
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	2381.6	2381.6	2381.6	2381.6	2381.6	2381.6	2381.6	2381.6	2381.6	2381.6	2381.6
2.5°	2639.4	2631.1	2622.8	2620.4	2617.9	2610.1	2602.3	2584.7	2567.2	2549.1	2531.0
5°	2817.1	2818.1	2819.1	2816.7	2814.2	2804.0	2793.7	2772.2	2750.7	2727.3	2703.9
7.5°	2762.5	2778.1	2793.7	2796.6	2799.6	2807.4	2815.2	2810.3	2805.4	2796.6	2787.9
10°	2523.2	2522.2	2521.3	2538.8	2556.4	2608.7	2660.9	2687.8	2714.6	2738.5	2762.5
12.5°	2132.6	2134.1	2135.6	2193.2	2250.8	2300.1	2349.4	2417.8	2486.1	2559.8	2633.6
15°	1704.0	1727.9	1751.8	1803.1	1854.3	1928.5	2002.8	2094.5	2186.3	2303.0	2419.7
17.5°	1399.3	1409.5	1419.8	1469.1	1518.4	1588.7	1659.0	1763.0	1867.0	2017.4	2167.8
20°	1153.2	1162.5	1171.8	1207.4	1243.1	1310.4	1377.8	1476.9	1576.0	1725.0	1873.9
22.5°	962.8	980.9	998.9	1022.9	1046.8	1095.6	1144.4	1245.5	1346.6	1482.3	1618.0
25°	847.6	855.9	864.2	884.7	905.2	952.1	998.9	1065.8	1132.7	1268.0	1403.2
27.5°	769.5	771.9	774.3	789.5	804.6	834.9	865.2	927.2	989.2	1100.5	1211.8
30°	705.0	709.4	713.8	725.5	737.2	759.2	781.2	825.1	869.1	968.7	1068.3
32.5°	655.2	657.7	660.1	669.9	679.6	695.7	711.9	746.5	781.2	857.3	933.5
35°	612.3	612.7	613.2	620.6	627.9	643.5	659.1	687.9	716.7	772.9	829.0
37.5°	563.4	566.8	570.3	575.6	581.0	594.7	608.3	631.8	655.2	701.6	748.0
40°	522.4	525.3	528.3	534.6	541.0	551.7	562.5	583.9	605.4	645.5	685.5
42.5°	481.4	483.4	485.3	491.7	498.0	511.2	524.4	541.5	558.5	591.7	624.9
45°	435.5	440.4	445.3	452.1	458.9	470.2	481.4	499.0	516.6	544.9	573.2
47.5°	397.4	399.9	402.3	408.2	414.0	427.7	441.4	457.0	472.6	499.0	525.3
50°	359.3	360.3	361.3	366.7	372.0	384.2	396.5	414.5	432.6	457.0	481.4
52.5°	323.2	325.7	328.1	333.5	338.8	347.1	355.4	374.0	392.5	416.5	440.4
55°	290.0	291.5	292.9	296.8	300.8	310.5	320.3	336.4	352.5	374.5	396.5
57.5°	258.8	260.7	262.7	265.6	268.5	277.3	286.1	300.3	314.4	336.4	358.4
60°	226.5	229.0	231.4	234.8	238.3	245.1	251.9	264.6	277.3	296.8	316.4
62.5°	203.1	203.6	204.1	207.0	209.9	214.8	219.7	230.0	240.2	259.7	279.3
65°	176.7	178.2	179.7	181.1	182.6	186.5	190.4	199.2	208.0	222.6	237.3
67.5°	149.4	150.9	152.3	154.8	157.2	160.6	164.0	169.9	175.8	189.4	203.1
70°	116.2	116.2	116.2	120.1	124.0	129.9	135.7	140.1	144.5	155.7	167.0
72.5°	94.7	95.2	95.7	96.2	96.7	100.1	103.5	110.8	118.2	125.0	131.8
75°	77.1	77.6	78.1	78.6	79.1	80.1	81.0	83.5	85.9	93.7	101.6
77.5°	61.5	62.0	62.5	63.0	63.5	64.4	65.4	66.4	67.4	70.3	73.2
80°	46.9	47.4	47.8	48.3	48.8	49.3	49.8	50.8	51.8	53.2	54.7
82.5°	34.2	34.2	34.2	34.2	34.2	35.2	36.1	36.1	36.1	37.1	38.1
85°	21.5	21.5	21.5	22.0	22.5	22.5	22.5	22.9	23.4	23.4	23.4
87.5°	9.8	9.3	8.8	9.3	9.8	9.8	9.8	10.3	10.7	10.7	10.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	2381.6	2381.6	2381.6	2381.6	2381.6	2381.6	2381.6	2381.6	2381.6	2381.6	2381.6
2.5°	2528.6	2526.2	2502.7	2479.3	2456.3	2433.4	2416.3	2399.2	2370.4	2341.6	2323.5
5°	2685.3	2666.8	2629.7	2592.6	2536.9	2481.2	2434.4	2387.5	2327.9	2268.4	2218.6
7.5°	2772.7	2757.6	2712.7	2667.7	2594.0	2520.3	2447.1	2373.8	2285.9	2198.1	2122.9
10°	2775.2	2787.9	2750.7	2713.6	2630.6	2547.6	2448.0	2348.4	2230.3	2112.1	2015.0
12.5°	2688.2	2742.9	2735.1	2727.3	2642.8	2558.4	2437.3	2316.2	2171.2	2026.2	1904.6
15°	2525.7	2631.6	2662.9	2694.1	2624.3	2554.5	2416.8	2279.1	2108.7	1938.3	1798.7
17.5°	2316.2	2464.6	2547.1	2629.7	2578.9	2528.1	2377.2	2226.4	2034.5	1842.6	1690.8
20°	2068.2	2262.5	2391.9	2521.3	2502.7	2484.2	2328.4	2172.7	1965.7	1758.6	1594.1
22.5°	1823.1	2028.1	2206.8	2385.5	2404.6	2423.6	2266.4	2109.2	1882.7	1656.1	1488.6
25°	1611.7	1820.2	2033.0	2245.9	2288.9	2331.8	2182.4	2033.0	1798.2	1563.3	1396.9
27.5°	1410.0	1608.3	1842.6	2077.0	2155.1	2233.2	2096.5	1959.8	1715.2	1470.6	1304.6
30°	1245.5	1422.7	1662.0	1901.2	2010.1	2119.0	1993.5	1868.0	1625.4	1382.7	1220.1
32.5°	1092.2	1250.9	1491.1	1731.3	1857.8	1984.2	1875.8	1767.4	1534.1	1300.7	1140.0
35°	971.1	1113.2	1337.3	1561.4	1703.0	1844.6	1755.7	1666.9	1438.8	1210.8	1059.0
37.5°	867.1	986.2	1196.7	1407.1	1557.5	1707.9	1633.7	1559.4	1345.1	1130.8	987.2
40°	781.2	876.9	1072.7	1268.4	1415.9	1563.3	1499.9	1436.4	1244.5	1052.6	918.4
42.5°	707.5	790.0	965.7	1141.5	1276.7	1412.0	1370.0	1328.0	1154.2	980.4	855.9
45°	642.5	711.9	866.6	1021.4	1145.9	1270.4	1237.2	1204.0	1054.1	904.2	790.0
47.5°	584.9	644.5	782.6	920.8	1032.6	1144.4	1113.7	1082.9	958.9	834.9	730.9
50°	532.2	583.0	698.2	813.4	914.0	1014.6	989.2	963.8	861.3	758.7	668.9
52.5°	482.4	524.4	627.9	731.4	812.4	893.5	873.9	854.4	775.3	696.2	614.7
55°	435.0	473.6	561.0	648.4	717.7	787.0	767.5	748.0	686.5	624.9	553.2
57.5°	392.1	425.7	496.5	567.3	622.5	677.7	668.4	659.1	607.9	556.6	497.5
60°	346.7	376.9	438.0	499.0	543.4	587.8	577.1	566.4	529.7	493.1	442.3
62.5°	306.1	333.0	381.8	430.6	466.8	502.9	495.1	487.3	459.4	431.6	389.6
65°	263.6	290.0	329.6	369.1	397.4	425.7	418.9	412.1	391.1	370.1	336.4
67.5°	225.1	247.0	281.2	315.4	334.4	353.5	349.6	345.7	329.6	313.5	287.1
70°	186.0	205.1	233.4	261.7	274.9	288.1	289.5	291.0	276.3	261.7	242.2
72.5°	147.0	162.1	188.5	214.8	225.1	235.3	234.8	234.4	225.6	216.8	199.2
75°	112.8	124.0	144.5	165.0	173.8	182.6	184.6	186.5	178.2	169.9	160.1
77.5°	81.0	88.9	104.5	120.1	129.9	139.6	140.6	141.6	137.7	133.8	124.5
80°	57.1	59.6	69.3	79.1	89.3	99.6	101.1	102.5	98.6	94.7	88.9
82.5°	39.5	41.0	44.4	47.8	56.1	64.4	66.4	68.4	66.4	64.4	58.1
85°	23.9	24.4	25.9	27.3	31.2	35.2	37.1	39.1	38.1	37.1	33.7
87.5°	10.7	10.7	11.2	11.7	12.7	13.7	16.1	18.6	17.1	15.6	14.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	2381.6	2381.6	2381.6	2381.6	2381.6	2381.6	2381.6	2381.6	2381.6	2381.6	2381.6
2.5°	2305.5	2277.6	2249.8	2229.8	2209.8	2184.9	2160.0	2159.0	2158.0	2139.5	2120.9
5°	2168.8	2120.4	2072.1	2024.7	1977.4	1930.0	1882.7	1871.9	1861.2	1845.1	1828.9
7.5°	2047.7	1970.5	1893.4	1832.9	1772.3	1725.0	1677.6	1645.4	1613.1	1588.2	1563.3
10°	1917.8	1822.1	1726.4	1653.2	1579.9	1528.7	1477.4	1440.3	1403.2	1385.6	1368.0
12.5°	1783.1	1679.1	1575.1	1503.3	1431.5	1370.0	1308.5	1274.8	1241.1	1216.7	1192.3
15°	1659.0	1547.2	1435.4	1359.3	1283.1	1225.5	1167.9	1134.2	1100.5	1076.1	1051.7
17.5°	1538.9	1426.1	1313.4	1236.2	1159.1	1106.8	1054.6	1021.9	989.2	974.0	958.9
20°	1429.6	1315.8	1202.0	1129.3	1056.6	1005.3	954.0	936.4	918.9	904.7	890.5
22.5°	1321.2	1211.8	1102.4	1032.6	962.8	925.7	888.6	874.4	860.3	849.5	838.8
25°	1230.4	1121.5	1012.6	951.6	890.5	861.7	832.9	823.7	814.4	803.6	792.9
27.5°	1138.6	1035.1	931.6	882.7	833.9	810.5	787.0	775.3	763.6	754.8	746.0
30°	1057.5	961.8	866.1	825.6	785.1	764.6	744.1	731.4	718.7	710.4	702.1
32.5°	979.4	894.5	809.5	774.8	740.2	720.2	700.1	687.9	675.7	666.0	656.2
35°	907.1	833.4	759.7	728.0	696.2	676.2	656.2	644.0	631.8	622.0	612.3
37.5°	843.7	776.8	709.9	680.1	650.3	632.8	615.2	602.5	589.8	579.5	569.3
40°	784.1	725.0	666.0	637.2	608.3	589.3	570.3	559.0	547.8	538.5	529.3
42.5°	731.4	677.2	623.0	594.7	566.4	548.3	530.2	517.0	503.9	498.5	493.1
45°	675.7	627.9	580.0	552.7	525.3	506.3	487.3	476.0	464.8	459.9	455.0
47.5°	626.9	582.5	538.0	511.2	484.3	467.2	450.2	441.4	432.6	425.7	418.9
50°	579.1	536.1	493.1	467.2	441.4	426.7	412.1	401.3	390.6	385.7	380.8
52.5°	533.2	494.1	455.0	428.7	402.3	388.2	374.0	364.7	355.4	345.2	334.9
55°	481.4	447.2	413.1	389.6	366.2	351.5	336.9	326.1	315.4	304.7	293.9
57.5°	438.4	404.8	371.1	350.1	329.1	314.9	300.8	289.0	277.3	268.5	259.7
60°	391.6	362.3	333.0	312.5	292.0	278.3	264.6	253.4	242.2	237.8	233.4
62.5°	347.6	320.3	292.9	274.9	256.8	243.6	230.4	223.1	215.8	212.9	209.9
65°	302.7	279.3	255.8	239.2	222.6	211.4	200.2	196.8	193.3	190.9	188.5
67.5°	260.7	240.7	220.7	206.0	191.4	183.6	175.8	171.9	168.0	165.0	162.1
70°	222.6	205.1	187.5	174.8	162.1	154.8	147.4	144.0	140.6	135.2	129.9
72.5°	181.6	168.0	154.3	144.5	134.8	128.4	122.1	115.2	108.4	103.5	98.6
75°	150.4	136.7	123.0	113.8	104.5	97.2	89.8	87.4	85.0	83.5	82.0
77.5°	115.2	103.5	91.8	84.5	77.1	73.7	70.3	68.8	67.4	66.9	66.4
80°	83.0	73.2	63.5	59.6	55.7	54.7	53.7	52.7	51.8	51.3	50.8
82.5°	51.8	46.9	42.0	41.0	40.0	39.5	39.1	38.6	38.1	37.6	37.1
85°	30.3	28.3	26.4	25.9	25.4	24.9	24.4	24.4	24.4	24.4	24.4
87.5°	12.7	12.7	12.7	12.7	12.7	12.7	12.7	12.7	12.7	12.2	11.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P832484

CATALOG NUMBER: S123RDP-S775D950-4F0-1E-UDD-G

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	2381.6	2381.6	2381.6	2381.6
2.5°	2116.0	2111.1	2109.2	2107.2
5°	1813.8	1798.7	1795.3	1791.8
7.5°	1557.0	1550.7	1529.7	1508.7
10°	1348.5	1329.0	1320.2	1311.4
12.5°	1174.2	1156.2	1153.2	1150.3
15°	1039.0	1026.3	1021.9	1017.5
17.5°	950.1	941.3	936.0	930.6
20°	884.2	877.9	873.9	870.0
22.5°	833.9	829.0	826.1	823.2
25°	785.6	778.3	775.8	773.4
27.5°	739.7	733.3	730.9	728.5
30°	696.7	691.3	687.9	684.5
32.5°	649.8	643.5	641.5	639.6
35°	608.3	604.4	602.5	600.5
37.5°	564.4	559.5	556.6	553.7
40°	526.8	524.4	522.9	521.4
42.5°	488.7	484.3	483.8	483.4
45°	450.6	446.3	445.3	444.3
47.5°	415.0	411.1	410.6	410.1
50°	375.5	370.1	366.2	362.3
52.5°	330.1	325.2	321.8	318.3
55°	288.5	283.2	280.2	277.3
57.5°	257.3	254.9	253.4	251.9
60°	231.9	230.4	229.5	228.5
62.5°	208.5	207.0	207.0	207.0
65°	187.0	185.5	184.1	182.6
67.5°	159.2	156.2	155.7	155.3
70°	125.5	121.1	120.6	120.1
72.5°	98.1	97.6	96.7	95.7
75°	81.0	80.1	80.1	80.1
77.5°	65.4	64.4	64.4	64.4
80°	50.3	49.8	50.3	50.8
82.5°	37.1	37.1	36.6	36.1
85°	23.9	23.4	23.4	23.4
87.5°	11.7	11.7	11.7	11.7
90°	0.0	0.0	0.0	0.0

TEST NUMBER: P832484

CATALOG NUMBER: S123RDP-S775D950-4F0-1E-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	15.97	17.43	16.34	17.74	18.06	20.64	22.10	21.00	22.41	22.72
	3H	17.24	18.54	17.62	18.87	19.23	22.18	23.48	22.56	23.81	24.18
	4H	17.65	18.87	18.05	19.22	19.60	22.70	23.92	23.10	24.27	24.65
	6H	17.96	19.08	18.37	19.45	19.84	23.04	24.16	23.45	24.53	24.92
	8H	18.06	19.13	18.49	19.52	19.92	23.13	24.20	23.56	24.59	25.00
	12H	18.13	19.15	18.56	19.54	19.97	23.18	24.21	23.61	24.59	25.02
4H	2H	16.77	17.99	17.17	18.34	18.72	20.70	21.92	21.10	22.27	22.65
	3H	18.19	19.20	18.60	19.60	20.00	22.41	23.42	22.82	23.82	24.23
	4H	18.66	19.57	19.10	19.99	20.43	23.04	23.95	23.47	24.37	24.81
	6H	19.06	19.85	19.52	20.29	20.75	23.51	24.30	23.97	24.74	25.20
	8H	19.20	19.93	19.66	20.38	20.85	23.65	24.39	24.12	24.83	25.30
	12H	19.30	19.95	19.78	20.43	20.91	23.74	24.39	24.22	24.87	25.35
8H	4H	19.02	19.75	19.48	20.20	20.67	23.05	23.78	23.51	24.23	24.70
	6H	19.50	20.11	20.00	20.60	21.08	23.57	24.17	24.06	24.66	25.14
	8H	19.70	20.24	20.21	20.75	21.24	23.75	24.29	24.27	24.81	25.29
	12H	19.86	20.34	20.37	20.83	21.40	23.89	24.37	24.41	24.87	25.43
12H	4H	19.06	19.71	19.54	20.19	20.66	23.03	23.68	23.51	24.16	24.63
	6H	19.56	20.10	20.08	20.62	21.10	23.54	24.08	24.06	24.59	25.08
	8H	19.81	20.28	20.32	20.78	21.34	23.76	24.24	24.27	24.73	25.30