

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: P832483

Luminaire Tested: S123RDP-S775D940-4F0-1E-UDD-G

Issue Date: 05/03/2024

Tested By:

Approved By:



NVLAP Lab Code: 200050-0

Cooper Lighting Solutions laboratories have been accredited by National Voluntary Laboratory Accreditation Program (NVLAP) that it adheres to the requirements of ISO/IEC 17025:2005 and appropriate IESNA test methods. This report must not be used to claim product certification, approval or endorsement by NVLAP, NIST or any agency of the Federal Government. Results contained in this report are valid for luminaire sample tested, as supplied by requestor. Information related to the luminaire tested has been supplied by requestor and can affect the validity of the test results. Report shall not be reproduced except in full without approval of Cooper Lighting Solutions Lighting Laboratory. Test performed at address noted above.

Test Information

Test Method: LM-79-2019
 Report Number: P832483
 Test Lab: INNOVATION CENTER
 Issue Date: 05/03/2024
 Manufacturer: COOPER LIGHTING SOLUTIONS
 Product Line: NEO-RAY
 Catalog Number: S123RDP-S775D940-4F0-1E-UDD-G
 Description: DEFINE 3 DIRECT PENDANT LED LUMINAIRE
 DOWNLIGHT 775 LUMENS PER FOOT, GRAZE OPTIC

Light Source: -
 Ballast/Driver: -

Summary

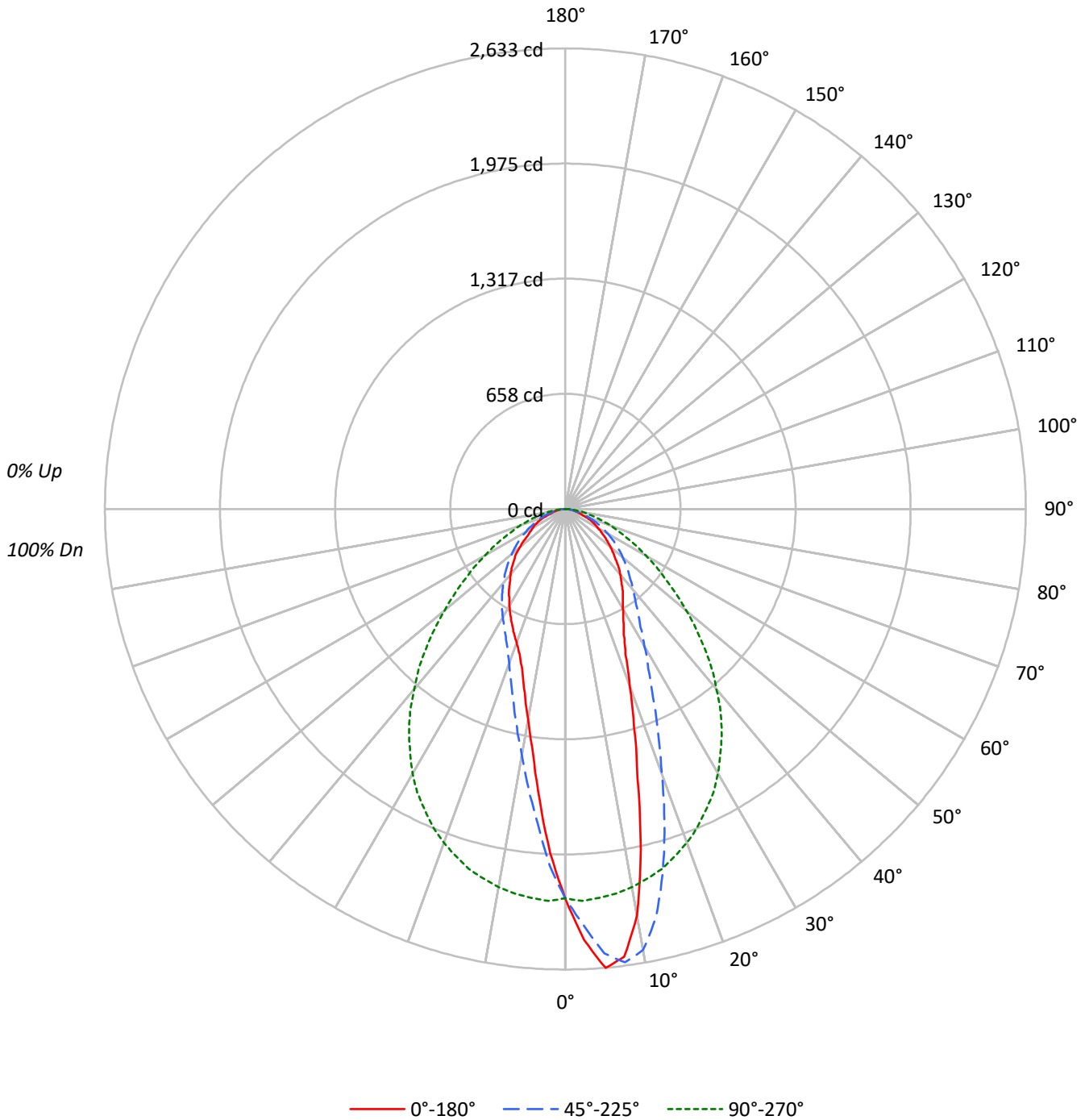
Lumens per Lamp: N/A
 Luminaire Lumens: 2951.5 lumens
 Efficiency: N/A
 Efficacy: 114.0 lumens/watt
 Spacing Criteria (0/90/45): 0.55 / 1.17 / 0.8
 Luminous Opening: Rectangular (W 4' x L: 0.25' x H: 0')
 CIE Type: Direct

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

TEST NUMBER: P832483
CATALOG NUMBER: S123RDP-S775D940-4F0-1E-UDD-G

Luminous Intensity Polar Plot



TEST NUMBER: P832483

CATALOG NUMBER: S123RDP-S775D940-4F0-1E-UDD-G

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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	23962	23962	23962	23962	23962
5°	28452	27544	24113	19492	18096
10°	25778	27977	23992	15618	13398
15°	17748	23989	23739	12765	10599
20°	12347	18468	23262	10763	9315
25°	9409	14076	22569	9567	8586
30°	8191	11253	21701	8883	7952
35°	7520	9493	20473	8306	7376
40°	6861	8477	18865	7739	6849
45°	6197	7753	17131	7203	6322
50°	5625	7154	15086	6680	5670
55°	5088	6568	13120	6167	4864
60°	4560	5974	11397	5599	4598
65°	4208	5300	9811	5033	4348
70°	3418	4582	8560	4554	3534
75°	2999	3643	7249	3776	3111
80°	2715	3081	5938	3168	2944
85°	2482	2705	4508	2878	2705

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 80°
 Vertical Angle: 45°
 Luminance: 18077 cd/sqm

TEST NUMBER: P832483

CATALOG NUMBER: S123RDP-S775D940-4F0-1E-UDD-G

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	202.9	6.9
10°-20°	469.5	15.9
20°-30°	538.7	18.3
30°-40°	531.0	18.0
40°-50°	468.3	15.9
50°-60°	360.2	12.2
60°-70°	236.8	8.0
70°-80°	115.0	3.9
80°-90°	29.0	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°	1211.1	41.0
0°-40°	1742.1	59.0
0°-60°	2570.6	87.1
0°-90°	2951.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2951.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2226	2226	2226	2226	2226	
5°	2633	2549	2232	1804	1675	241
15°	1593	2153	2130	1146	951	450
25°	792	1185	1900	806	723	374
35°	572	722	1558	632	561	357
45°	407	509	1125	473	415	316
55°	271	350	699	329	259	243
65°	165	208	385	198	171	162
75°	72	88	174	91	75	78
85°	20	22	36	23	22	23
90°	0	0	0	0	0	

TEST NUMBER: P832483

CATALOG NUMBER: S123RDP-S775D940-4F0-1E-UDD-G

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	2226.1	2226.1	2226.1	2226.1	2226.1	2226.1	2226.1	2226.1	2226.1	2226.1	2226.1
2.5°	2467.1	2459.3	2451.6	2449.3	2447.0	2439.7	2432.4	2416.0	2399.5	2382.7	2365.8
5°	2633.2	2634.1	2635.0	2632.7	2630.5	2620.9	2611.3	2591.2	2571.1	2549.2	2527.3
7.5°	2582.1	2596.7	2611.3	2614.0	2616.8	2624.1	2631.4	2626.8	2622.3	2614.0	2605.8
10°	2358.5	2357.6	2356.6	2373.1	2389.5	2438.3	2487.2	2512.3	2537.4	2559.7	2582.1
12.5°	1993.4	1994.8	1996.1	2050.0	2103.8	2149.9	2196.0	2259.9	2323.8	2392.7	2461.6
15°	1592.7	1615.1	1637.4	1685.3	1733.3	1802.6	1872.0	1957.8	2043.6	2152.7	2261.7
17.5°	1307.9	1317.5	1327.1	1373.2	1419.3	1485.0	1550.7	1647.9	1745.1	1885.7	2026.2
20°	1077.9	1086.6	1095.3	1128.6	1161.9	1224.9	1287.9	1380.5	1473.1	1612.3	1751.5
22.5°	899.9	916.8	933.7	956.1	978.4	1024.1	1069.7	1164.2	1258.6	1385.5	1512.4
25°	792.2	800.0	807.8	826.9	846.1	889.9	933.7	996.2	1058.8	1185.2	1311.6
27.5°	719.2	721.5	723.8	737.9	752.1	780.4	808.7	866.6	924.6	1028.6	1132.7
30°	659.0	663.1	667.2	678.2	689.1	709.6	730.2	771.3	812.3	905.4	998.5
32.5°	612.4	614.7	617.0	626.1	635.3	650.3	665.4	697.8	730.2	801.4	872.6
35°	572.3	572.7	573.2	580.0	586.9	601.5	616.1	643.0	669.9	722.4	774.9
37.5°	526.6	529.8	533.0	538.0	543.1	555.8	568.6	590.5	612.4	655.8	699.1
40°	488.3	491.0	493.8	499.7	505.6	515.7	525.7	545.8	565.9	603.3	640.7
42.5°	450.0	451.8	453.6	459.6	465.5	477.8	490.1	506.1	522.1	553.1	584.1
45°	407.1	411.6	416.2	422.6	429.0	439.5	450.0	466.4	482.8	509.3	535.8
47.5°	371.5	373.8	376.0	381.5	387.0	399.8	412.6	427.2	441.8	466.4	491.0
50°	335.9	336.8	337.7	342.7	347.7	359.2	370.6	387.5	404.3	427.2	450.0
52.5°	302.1	304.4	306.7	311.7	316.7	324.5	332.2	349.6	366.9	389.3	411.6
55°	271.1	272.4	273.8	277.5	281.1	290.2	299.4	314.4	329.5	350.0	370.6
57.5°	241.9	243.7	245.5	248.3	251.0	259.2	267.4	280.7	293.9	314.4	335.0
60°	211.8	214.0	216.3	219.5	222.7	229.1	235.5	247.3	259.2	277.5	295.7
62.5°	189.8	190.3	190.8	193.5	196.2	200.8	205.4	214.9	224.5	242.8	261.0
65°	165.2	166.6	167.9	169.3	170.7	174.3	178.0	186.2	194.4	208.1	221.8
67.5°	139.6	141.0	142.4	144.7	146.9	150.1	153.3	158.8	164.3	177.1	189.8
70°	108.6	108.6	108.6	112.3	115.9	121.4	126.9	131.0	135.1	145.6	156.1
72.5°	88.5	89.0	89.4	89.9	90.4	93.6	96.7	103.6	110.4	116.8	123.2
75°	72.1	72.6	73.0	73.5	73.9	74.8	75.8	78.0	80.3	87.6	94.9
77.5°	57.5	58.0	58.4	58.9	59.3	60.2	61.2	62.1	63.0	65.7	68.5
80°	43.8	44.3	44.7	45.2	45.6	46.1	46.5	47.5	48.4	49.7	51.1
82.5°	31.9	31.9	31.9	31.9	31.9	32.9	33.8	33.8	33.8	34.7	35.6
85°	20.1	20.1	20.1	20.5	21.0	21.0	21.0	21.4	21.9	21.9	21.9
87.5°	9.1	8.7	8.2	8.7	9.1	9.1	9.1	9.6	10.0	10.0	10.0
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: P832483

CATALOG NUMBER: S123RDP-S775D940-4F0-1E-UDD-G

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	2226.1	2226.1	2226.1	2226.1	2226.1	2226.1	2226.1	2226.1	2226.1	2226.1	2226.1
2.5°	2363.5	2361.2	2339.3	2317.4	2296.0	2274.5	2258.5	2242.6	2215.6	2188.7	2171.8
5°	2510.0	2492.6	2458.0	2423.3	2371.3	2319.2	2275.4	2231.6	2175.9	2120.3	2073.7
7.5°	2591.7	2577.5	2535.5	2493.6	2424.6	2355.7	2287.3	2218.8	2136.7	2054.5	1984.3
10°	2594.0	2605.8	2571.1	2536.5	2458.9	2381.3	2288.2	2195.1	2084.7	1974.2	1883.4
12.5°	2512.7	2563.8	2556.5	2549.2	2470.3	2391.3	2278.2	2165.0	2029.4	1893.9	1780.3
15°	2360.8	2459.8	2489.0	2518.2	2452.9	2387.7	2259.0	2130.3	1971.0	1811.8	1681.2
17.5°	2165.0	2303.7	2380.8	2458.0	2410.5	2363.0	2222.0	2081.0	1901.7	1722.3	1580.4
20°	1933.1	2114.8	2235.7	2356.6	2339.3	2322.0	2176.4	2030.8	1837.3	1643.8	1490.0
22.5°	1704.1	1895.7	2062.8	2229.8	2247.6	2265.4	2118.4	1971.5	1759.7	1548.0	1391.4
25°	1506.4	1701.3	1900.3	2099.3	2139.4	2179.6	2039.9	1900.3	1680.8	1461.3	1305.6
27.5°	1318.0	1503.3	1722.3	1941.4	2014.4	2087.4	1959.6	1831.8	1603.2	1374.6	1219.4
30°	1164.2	1329.8	1553.5	1777.1	1878.8	1980.6	1863.3	1746.0	1519.2	1292.4	1140.4
32.5°	1020.9	1169.2	1393.7	1618.3	1736.5	1854.7	1753.3	1652.0	1433.9	1215.7	1065.6
35°	907.7	1040.5	1250.0	1459.4	1591.8	1724.1	1641.1	1558.0	1344.9	1131.8	989.8
37.5°	810.5	921.8	1118.5	1315.2	1455.8	1596.4	1527.0	1457.6	1257.3	1056.9	922.8
40°	730.2	819.6	1002.6	1185.6	1323.4	1461.3	1401.9	1342.6	1163.3	983.9	858.4
42.5°	661.3	738.4	902.7	1067.0	1193.4	1319.8	1280.5	1241.3	1078.8	916.4	800.0
45°	600.6	665.4	810.0	954.7	1071.1	1187.5	1156.4	1125.4	985.3	845.2	738.4
47.5°	546.7	602.4	731.5	860.7	965.2	1069.7	1041.0	1012.2	896.3	780.4	683.2
50°	497.4	544.9	652.6	760.3	854.3	948.3	924.6	900.9	805.0	709.2	625.2
52.5°	450.9	490.1	586.9	683.6	759.4	835.1	816.9	798.6	724.7	650.8	574.6
55°	406.6	442.7	524.4	606.0	670.9	735.7	717.4	699.1	641.6	584.1	517.1
57.5°	366.5	397.9	464.1	530.3	581.9	633.4	624.8	616.1	568.2	520.3	465.0
60°	324.0	352.3	409.4	466.4	507.9	549.5	539.4	529.4	495.2	460.9	413.5
62.5°	286.1	311.2	356.9	402.5	436.3	470.1	462.8	455.4	429.4	403.4	364.2
65°	246.4	271.1	308.0	345.0	371.5	397.9	391.6	385.2	365.5	345.9	314.4
67.5°	210.4	230.9	262.9	294.8	312.6	330.4	326.8	323.1	308.0	293.0	268.3
70°	173.9	191.7	218.1	244.6	256.9	269.3	270.6	272.0	258.3	244.6	226.4
72.5°	137.4	151.5	176.2	200.8	210.4	220.0	219.5	219.1	210.8	202.6	186.2
75°	105.4	115.9	135.1	154.3	162.5	170.7	172.5	174.3	166.6	158.8	149.7
77.5°	75.8	83.1	97.7	112.3	121.4	130.5	131.4	132.3	128.7	125.0	116.4
80°	53.4	55.7	64.8	73.9	83.5	93.1	94.5	95.8	92.2	88.5	83.1
82.5°	37.0	38.3	41.5	44.7	52.5	60.2	62.1	63.9	62.1	60.2	54.3
85°	22.4	22.8	24.2	25.6	29.2	32.9	34.7	36.5	35.6	34.7	31.5
87.5°	10.0	10.0	10.5	11.0	11.9	12.8	15.1	17.3	16.0	14.6	13.2
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: P832483

CATALOG NUMBER: S123RDP-S775D940-4F0-1E-UDD-G

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	2226.1	2226.1	2226.1	2226.1	2226.1	2226.1	2226.1	2226.1	2226.1	2226.1	2226.1
2.5°	2154.9	2128.9	2102.9	2084.2	2065.5	2042.2	2018.9	2018.0	2017.1	1999.8	1982.4
5°	2027.2	1982.0	1936.8	1892.5	1848.3	1804.0	1759.7	1749.7	1739.6	1724.6	1709.5
7.5°	1914.0	1841.9	1769.8	1713.2	1656.6	1612.3	1568.1	1537.9	1507.8	1484.5	1461.3
10°	1792.6	1703.1	1613.7	1545.2	1476.8	1428.9	1380.9	1346.3	1311.6	1295.2	1278.7
12.5°	1666.6	1569.4	1472.2	1405.1	1338.1	1280.5	1223.0	1191.6	1160.1	1137.3	1114.4
15°	1550.7	1446.2	1341.7	1270.5	1199.3	1145.5	1091.6	1060.1	1028.6	1005.8	983.0
17.5°	1438.5	1333.0	1227.6	1155.5	1083.4	1034.6	985.7	955.2	924.6	910.4	896.3
20°	1336.2	1229.9	1123.6	1055.6	987.6	939.6	891.7	875.3	858.9	845.6	832.4
22.5°	1234.9	1132.7	1030.5	965.2	899.9	865.3	830.6	817.3	804.1	794.1	784.0
25°	1150.0	1048.3	946.5	889.4	832.4	805.5	778.6	769.9	761.2	751.2	741.1
27.5°	1064.2	967.5	870.7	825.1	779.5	757.6	735.7	724.7	713.7	705.5	697.3
30°	988.5	899.0	809.6	771.7	733.8	714.7	695.5	683.6	671.8	664.0	656.2
32.5°	915.5	836.1	756.6	724.2	691.8	673.1	654.4	643.0	631.6	622.5	613.3
35°	847.9	779.0	710.1	680.4	650.8	632.1	613.3	601.9	590.5	581.4	572.3
37.5°	788.6	726.1	663.5	635.7	607.9	591.4	575.0	563.1	551.3	541.7	532.1
40°	732.9	677.7	622.5	595.6	568.6	550.8	533.0	522.5	512.0	503.4	494.7
42.5°	683.6	633.0	582.3	555.8	529.4	512.5	495.6	483.3	471.0	465.9	460.9
45°	631.6	586.9	542.2	516.6	491.0	473.2	455.4	445.0	434.5	429.9	425.3
47.5°	586.0	544.4	502.9	477.8	452.7	436.7	420.8	412.6	404.3	397.9	391.6
50°	541.2	501.1	460.9	436.7	412.6	398.9	385.2	375.1	365.1	360.5	356.0
52.5°	498.3	461.8	425.3	400.7	376.0	362.8	349.6	340.9	332.2	322.6	313.1
55°	450.0	418.0	386.1	364.2	342.3	328.6	314.9	304.8	294.8	284.8	274.7
57.5°	409.8	378.3	346.8	327.2	307.6	294.4	281.1	270.2	259.2	251.0	242.8
60°	366.0	338.6	311.2	292.1	272.9	260.1	247.3	236.9	226.4	222.2	218.1
62.5°	324.9	299.4	273.8	256.9	240.0	227.7	215.4	208.6	201.7	199.0	196.2
65°	282.9	261.0	239.1	223.6	208.1	197.6	187.1	183.9	180.7	178.4	176.2
67.5°	243.7	225.0	206.3	192.6	178.9	171.6	164.3	160.6	157.0	154.3	151.5
70°	208.1	191.7	175.2	163.4	151.5	144.7	137.8	134.6	131.4	126.4	121.4
72.5°	169.8	157.0	144.2	135.1	126.0	120.0	114.1	107.7	101.3	96.7	92.2
75°	140.6	127.8	115.0	106.3	97.7	90.8	84.0	81.7	79.4	78.0	76.7
77.5°	107.7	96.7	85.8	79.0	72.1	68.9	65.7	64.3	63.0	62.5	62.1
80°	77.6	68.5	59.3	55.7	52.0	51.1	50.2	49.3	48.4	47.9	47.5
82.5°	48.4	43.8	39.2	38.3	37.4	37.0	36.5	36.1	35.6	35.1	34.7
85°	28.3	26.5	24.6	24.2	23.7	23.3	22.8	22.8	22.8	22.8	22.8
87.5°	11.9	11.9	11.9	11.9	11.9	11.9	11.9	11.9	11.9	11.4	11.0
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: P832483

CATALOG NUMBER: S123RDP-S775D940-4F0-1E-UDD-G

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	2226.1	2226.1	2226.1	2226.1
2.5°	1977.9	1973.3	1971.5	1969.7
5°	1695.4	1681.2	1678.0	1674.8
7.5°	1455.3	1449.4	1429.8	1410.2
10°	1260.5	1242.2	1234.0	1225.8
12.5°	1097.5	1080.7	1077.9	1075.2
15°	971.1	959.3	955.2	951.1
17.5°	888.1	879.9	874.8	869.8
20°	826.5	820.5	816.9	813.2
22.5°	779.5	774.9	772.2	769.4
25°	734.3	727.4	725.2	722.9
27.5°	691.4	685.5	683.2	680.9
30°	651.2	646.2	643.0	639.8
32.5°	607.4	601.5	599.7	597.8
35°	568.6	565.0	563.1	561.3
37.5°	527.6	523.0	520.3	517.5
40°	492.4	490.1	488.8	487.4
42.5°	456.8	452.7	452.3	451.8
45°	421.2	417.1	416.2	415.3
47.5°	387.9	384.3	383.8	383.3
50°	350.9	345.9	342.3	338.6
52.5°	308.5	303.9	300.7	297.5
55°	269.7	264.7	262.0	259.2
57.5°	240.5	238.2	236.9	235.5
60°	216.8	215.4	214.5	213.6
62.5°	194.9	193.5	193.5	193.5
65°	174.8	173.4	172.0	170.7
67.5°	148.8	146.0	145.6	145.1
70°	117.3	113.2	112.7	112.3
72.5°	91.7	91.3	90.4	89.4
75°	75.8	74.8	74.8	74.8
77.5°	61.2	60.2	60.2	60.2
80°	47.0	46.5	47.0	47.5
82.5°	34.7	34.7	34.2	33.8
85°	22.4	21.9	21.9	21.9
87.5°	11.0	11.0	11.0	11.0
90°	0.0	0.0	0.0	0.0

TEST NUMBER: P832483

CATALOG NUMBER: S123RDP-S775D940-4F0-1E-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	15.74	17.20	16.11	17.51	17.83	20.41	21.86	20.77	22.17	22.49
	3H	17.01	18.31	17.38	18.64	19.00	21.95	23.25	22.33	23.58	23.94
	4H	17.41	18.63	17.82	18.98	19.36	22.46	23.68	22.86	24.03	24.41
	6H	17.72	18.85	18.14	19.22	19.61	22.80	23.93	23.22	24.30	24.69
	8H	17.83	18.90	18.26	19.29	19.69	22.90	23.97	23.33	24.36	24.76
	12H	17.90	18.92	18.33	19.30	19.73	22.95	23.97	23.38	24.36	24.78
4H	2H	16.53	17.75	16.93	18.10	18.48	20.47	21.69	20.87	22.04	22.42
	3H	17.95	18.96	18.37	19.36	19.77	22.18	23.19	22.59	23.59	23.99
	4H	18.43	19.34	18.86	19.76	20.20	22.81	23.71	23.24	24.13	24.57
	6H	18.83	19.62	19.29	20.06	20.52	23.27	24.06	23.73	24.51	24.97
	8H	18.96	19.70	19.43	20.14	20.61	23.42	24.15	23.88	24.60	25.06
	12H	19.07	19.72	19.55	20.20	20.67	23.51	24.16	23.99	24.64	25.11
8H	4H	18.79	19.52	19.25	19.97	20.43	22.81	23.55	23.28	23.99	24.46
	6H	19.27	19.87	19.77	20.37	20.85	23.33	23.94	23.83	24.43	24.91
	8H	19.46	20.01	19.98	20.52	21.01	23.52	24.06	24.03	24.57	25.06
	12H	19.63	20.11	20.14	20.60	21.17	23.66	24.14	24.17	24.63	25.20
12H	4H	18.82	19.48	19.31	19.96	20.43	22.79	23.45	23.28	23.93	24.40
	6H	19.33	19.87	19.84	20.38	20.87	23.31	23.85	23.82	24.36	24.85
	8H	19.57	20.05	20.09	20.54	21.11	23.53	24.00	24.04	24.50	25.06