

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: NEO-RAY

Report Number: P332802

Luminaire Tested: **S124DIW-S795D1560U835-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332802
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-10,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124DIW-S795D1560U835-4F0-1E-UDD-D1
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 795 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1560 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8652.9 lumens
Efficiency: N/A
Efficacy: 127.1 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.08')
CIE Type: Semi-Indirect

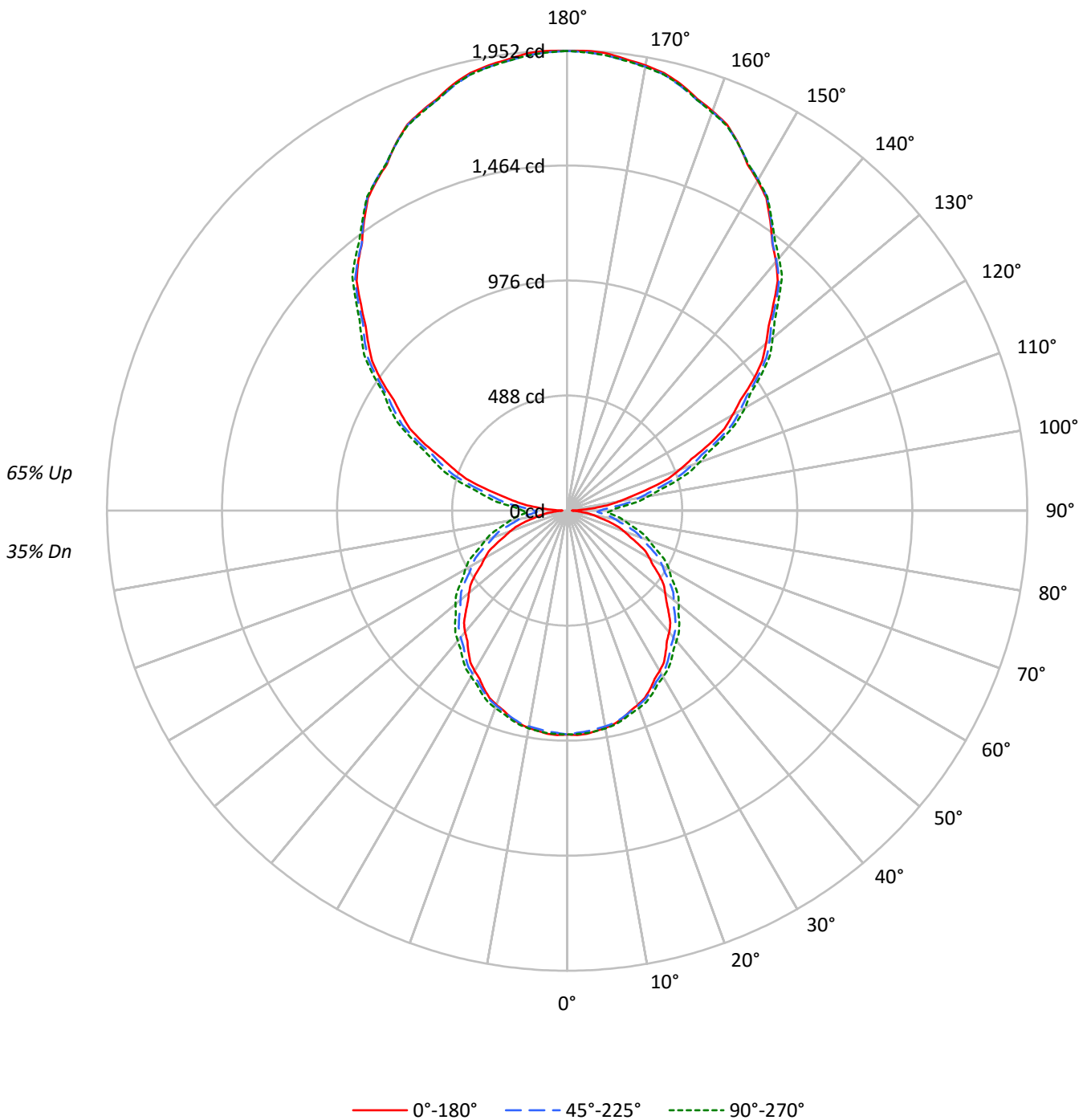
Input Watts (W): 68.1
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	0
RCR																		
0	103	103	103	103	93	93	93	93	75	75	75	58	58	58	42	42	42	35
1	94	89	85	81	84	81	77	74	64	62	60	50	48	47	36	35	34	28
2	85	77	71	66	76	70	65	60	56	52	49	43	41	38	31	30	28	23
3	77	68	60	54	69	61	55	50	49	44	41	38	35	32	27	25	24	19
4	70	60	52	46	63	54	47	42	43	38	34	34	30	27	24	22	20	16
5	65	53	45	39	58	48	41	36	39	33	29	30	26	23	22	19	17	14
6	59	47	39	33	53	43	36	31	35	29	25	27	23	20	20	17	15	12
7	55	43	35	29	49	39	32	27	31	26	22	24	21	18	18	15	13	10
8	51	38	31	26	46	35	28	24	28	23	20	22	18	16	16	14	12	9
9	47	35	28	23	42	32	25	21	26	21	17	20	17	14	15	13	11	8
10	44	32	25	20	40	29	23	19	24	19	16	19	15	13	14	11	10	8

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7668	7668	7668
5°	7692	7494	7516
10°	7645	7371	7366
15°	7577	7230	7190
20°	7473	7073	7019
25°	7357	6898	6831
30°	7231	6723	6637
35°	7088	6544	6468
40°	6974	6374	6291
45°	6804	6217	6140
50°	6661	6036	5980
55°	6513	5866	5792
60°	6282	5649	5621
65°	6029	5415	5409
70°	5722	5149	5165
75°	5296	4857	4943
80°	4819	4575	4724
85°	4219	4325	4598



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	89.9	1.0
10°-20°	257.7	3.0
20°-30°	389.7	4.5
30°-40°	471.5	5.4
40°-50°	498.5	5.8
50°-60°	469.1	5.4
60°-70°	389.2	4.5
70°-80°	273.4	3.2
80°-90°	160.4	1.9
90°-100°	220.4	2.5
100°-110°	448.9	5.2
110°-120°	692.1	8.0
120°-130°	878.3	10.1
130°-140°	968.6	11.2
140°-150°	943.1	10.9
150°-160°	791.3	9.1
160°-170°	526.5	6.1
170°-180°	184.4	2.1
0°-30°	737.4	8.5
0°-40°	1208.8	14.0
0°-60°	2176.4	25.2
0°-90°	2999.4	34.7
90°-120°	1361.4	15.7
90°-150°	4151.3	48.0
90°-180°	5654.0	65.3
0°-180°	8652.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	950	950	950	950	950	
5°	951	948	940	948	948	90
15°	912	912	909	918	918	257
25°	834	840	844	855	856	384
35°	730	742	753	767	771	457
45°	608	629	649	666	672	470
55°	476	499	531	551	558	424
65°	330	364	400	426	435	327
75°	183	223	267	296	306	195
85°	56	101	149	180	192	60
90°	22	81	138	177	190	17
95°	104	153	207	239	250	112
105°	361	385	429	459	473	384
115°	664	675	704	725	732	655
125°	962	962	986	1002	1006	857
135°	1237	1246	1254	1267	1269	957
145°	1501	1506	1508	1512	1512	939
155°	1719	1719	1717	1723	1717	791
165°	1871	1867	1864	1872	1867	527
175°	1947	1939	1938	1947	1938	185
180°	1950	1950	1950	1950	1950	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	949.9	949.9	949.9	949.9	949.9	949.9	949.9	949.9	949.9	949.9	949.9
2.5°	953.3	952.7	952.1	951.6	951.0	950.0	948.4	946.9	945.4	943.9	945.2
5°	950.9	950.2	949.5	948.8	948.1	946.9	945.2	943.6	941.9	940.3	942.2
7.5°	942.8	942.4	942.0	941.6	941.1	940.2	938.9	937.5	936.1	934.8	936.9
10°	936.0	935.8	935.6	935.3	935.1	934.4	933.2	932.0	930.8	929.6	931.8
12.5°	926.7	926.6	926.6	926.5	926.5	926.1	925.3	924.4	923.6	922.8	924.8
15°	911.6	911.8	912.0	912.3	912.5	912.3	911.6	910.9	910.1	909.4	911.6
17.5°	890.9	891.6	892.3	893.1	893.8	894.0	893.9	893.8	893.6	893.5	895.7
20°	876.5	877.2	877.9	878.6	879.3	879.8	880.0	880.2	880.5	880.7	883.1
22.5°	860.3	861.2	862.1	863.0	863.9	864.6	865.0	865.4	865.8	866.3	868.6
25°	833.9	835.3	836.8	838.2	839.6	840.7	841.4	842.1	842.8	843.5	846.1
27.5°	804.6	806.6	808.7	810.8	812.9	814.5	815.6	816.6	817.7	818.8	821.2
30°	785.0	786.9	788.8	790.7	792.6	794.3	796.0	797.6	799.3	800.9	803.5
32.5°	763.7	766.0	768.3	770.5	772.8	774.8	776.7	778.5	780.4	782.2	785.2
35°	729.7	732.5	735.4	738.2	741.0	743.6	746.0	748.4	750.7	753.1	756.4
37.5°	695.4	698.7	702.0	705.2	708.5	711.6	714.5	717.4	720.4	723.3	726.7
40°	673.3	676.4	679.4	682.5	685.6	688.8	692.1	695.4	698.7	702.0	705.6
42.5°	647.8	651.2	654.7	658.1	661.6	665.2	669.1	673.0	676.9	680.7	684.7
45°	608.4	612.9	617.4	621.9	626.4	630.9	635.4	639.9	644.3	648.8	652.9
47.5°	570.8	575.4	580.0	584.7	589.3	594.2	599.4	604.6	609.8	615.0	619.2
50°	543.5	548.7	553.9	559.1	564.3	569.5	574.7	579.9	585.1	590.3	595.1
52.5°	516.3	521.5	526.7	531.9	537.1	542.7	548.6	554.6	560.6	566.5	571.2
55°	476.5	481.5	486.5	491.4	496.4	502.4	509.5	516.6	523.7	530.8	535.5
57.5°	432.1	438.2	444.4	450.5	456.6	463.2	470.3	477.3	484.4	491.4	497.0
60°	403.1	409.3	415.4	421.6	427.7	434.7	442.5	450.3	458.1	465.9	471.3
62.5°	375.0	381.8	388.5	395.2	401.9	409.2	417.0	424.8	432.6	440.4	445.8
65°	329.7	337.3	344.9	352.4	360.0	367.8	375.8	383.9	391.9	399.9	405.8
67.5°	286.1	294.2	302.2	310.2	318.3	326.6	335.2	343.8	352.4	361.0	367.0
70°	256.3	264.4	272.4	280.5	288.5	297.0	306.0	315.0	323.9	332.9	339.3
72.5°	227.4	235.6	243.9	252.1	260.3	269.2	278.8	288.3	297.9	307.4	313.6
75°	183.0	191.7	200.4	209.2	217.9	227.3	237.2	247.1	257.1	267.0	273.6
77.5°	141.5	150.7	160.0	169.3	178.5	188.4	198.8	209.2	219.6	230.0	236.7
80°	115.9	125.4	134.8	144.3	153.8	163.7	174.1	184.5	194.9	205.3	212.4
82.5°	90.4	100.2	110.1	119.9	129.7	139.9	150.3	160.7	171.1	181.5	188.7
85°	56.4	66.3	76.2	86.2	96.1	106.4	117.0	127.6	138.3	148.9	156.0
87.5°	32.4	42.8	53.2	63.5	73.9	84.5	95.4	106.3	117.2	128.1	135.4
90°	21.5	34.7	47.8	61.0	74.1	87.1	99.9	112.8	125.6	138.5	147.3
92.5°	48.4	61.2	73.9	86.6	99.4	111.7	123.8	135.8	147.9	159.9	167.8
95°	104.3	115.1	125.9	136.7	147.6	159.0	171.0	183.1	195.1	207.1	214.5
97.5°	170.6	179.7	188.8	197.9	207.1	217.8	230.2	242.5	254.8	267.2	274.6
100°	222.8	230.3	237.8	245.3	252.7	262.6	274.8	287.1	299.3	311.5	318.6
102.5°	278.3	284.2	290.1	296.1	302.0	310.8	322.6	334.4	346.2	357.9	365.1
105°	360.9	366.0	371.0	376.1	381.1	388.7	398.8	408.9	419.0	429.1	436.0
107.5°	449.6	453.9	458.2	462.5	466.8	473.1	481.6	490.1	498.6	507.0	513.8
110°	509.1	513.1	517.1	521.0	525.0	531.0	538.9	546.9	554.8	562.7	567.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	571.0	574.1	577.1	580.2	583.2	588.4	595.7	603.0	610.3	617.6	622.7
115°	663.8	665.9	668.1	670.2	672.3	676.8	683.7	690.6	697.5	704.4	709.3
117.5°	752.2	753.8	755.3	756.9	758.4	762.5	769.1	775.6	782.2	788.8	792.6
120°	810.5	812.6	814.6	816.7	818.7	822.7	828.5	834.4	840.2	846.0	849.1
122.5°	872.0	872.7	873.4	874.1	874.7	878.1	884.1	890.1	896.1	902.1	905.7
125°	961.7	961.5	961.3	961.0	960.8	963.5	969.0	974.6	980.2	985.8	989.6
127.5°	1043.8	1044.6	1045.4	1046.2	1046.9	1049.3	1053.3	1057.3	1061.3	1065.3	1068.9
130°	1100.9	1101.7	1102.4	1103.2	1104.0	1106.2	1110.0	1113.8	1117.6	1121.4	1125.0
132.5°	1160.0	1160.5	1161.0	1161.5	1162.0	1163.6	1166.4	1169.2	1171.9	1174.7	1178.1
135°	1237.0	1239.1	1241.1	1243.1	1245.1	1246.9	1248.6	1250.2	1251.9	1253.5	1256.7
137.5°	1322.1	1322.8	1323.5	1324.2	1324.9	1325.9	1327.3	1328.6	1329.9	1331.3	1333.9
140°	1378.8	1379.2	1379.7	1380.1	1380.5	1380.9	1381.1	1381.3	1381.6	1381.8	1384.5
142.5°	1429.8	1430.4	1431.0	1431.7	1432.3	1432.4	1432.0	1431.6	1431.2	1430.8	1433.4
145°	1501.4	1502.5	1503.6	1504.7	1505.8	1506.5	1506.8	1507.2	1507.5	1507.8	1508.9
147.5°	1572.5	1573.9	1575.3	1576.6	1578.0	1578.6	1578.3	1578.0	1577.8	1577.5	1577.4
150°	1616.0	1617.1	1618.2	1619.3	1620.4	1620.9	1620.9	1620.9	1620.9	1620.9	1620.9
152.5°	1656.1	1656.9	1657.6	1658.4	1659.1	1659.7	1659.9	1660.2	1660.5	1660.7	1661.5
155°	1718.9	1718.9	1718.9	1718.9	1718.9	1718.8	1718.4	1718.1	1717.8	1717.4	1718.8
157.5°	1772.0	1771.4	1770.8	1770.2	1769.6	1769.3	1769.2	1769.1	1769.1	1769.0	1770.0
160°	1803.4	1803.0	1802.7	1802.4	1802.0	1801.7	1801.4	1801.0	1800.7	1800.4	1801.4
162.5°	1832.3	1831.5	1830.6	1829.7	1828.8	1828.2	1827.9	1827.6	1827.2	1826.9	1828.7
165°	1871.2	1870.2	1869.2	1868.2	1867.2	1866.4	1865.7	1865.0	1864.4	1863.7	1865.7
167.5°	1901.1	1899.7	1898.3	1896.9	1895.5	1894.8	1894.9	1894.9	1895.0	1895.1	1897.1
170°	1918.0	1916.3	1914.6	1912.9	1911.3	1910.6	1910.9	1911.3	1911.6	1911.9	1913.9
172.5°	1930.0	1928.6	1927.2	1925.8	1924.4	1923.7	1923.8	1923.9	1923.9	1924.0	1926.3
175°	1946.6	1944.9	1943.3	1941.6	1939.9	1938.9	1938.6	1938.2	1937.9	1937.6	1939.9
177.5°	1952.0	1950.7	1949.4	1948.0	1946.7	1946.0	1946.0	1946.0	1946.0	1946.0	1947.9
180°	1949.6	1949.6	1949.6	1949.6	1949.6	1949.6	1949.6	1949.6	1949.6	1949.6	1949.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	949.9	949.9	949.9	949.9	949.9	949.9	949.9	949.9
2.5°	946.5	947.9	949.2	949.8	949.6	949.4	949.2	949.0
5°	944.1	946.0	947.8	948.7	948.4	948.2	948.0	947.7
7.5°	939.0	941.1	943.3	944.2	944.0	943.7	943.5	943.3
10°	933.9	936.0	938.2	939.1	938.9	938.6	938.4	938.2
12.5°	926.7	928.7	930.6	931.5	931.5	931.4	931.4	931.3
15°	913.7	915.8	917.9	918.9	918.7	918.4	918.2	917.9
17.5°	897.8	900.0	902.2	903.2	903.0	902.8	902.6	902.4
20°	885.4	887.8	890.2	891.4	891.4	891.4	891.4	891.4
22.5°	871.0	873.3	875.7	877.1	877.5	877.8	878.2	878.6
25°	848.7	851.3	853.9	855.3	855.5	855.8	856.0	856.3
27.5°	823.6	826.0	828.5	829.8	830.1	830.4	830.7	830.9
30°	806.1	808.7	811.3	812.9	813.4	813.8	814.3	814.8
32.5°	788.2	791.2	794.1	795.9	796.3	796.8	797.3	797.8
35°	759.7	763.0	766.3	768.3	769.0	769.7	770.5	771.2
37.5°	730.0	733.4	736.7	738.8	739.5	740.3	741.0	741.8
40°	709.1	712.7	716.2	718.4	719.4	720.3	721.3	722.2
42.5°	688.6	692.5	696.4	698.8	699.5	700.3	701.1	701.8
45°	656.9	660.9	664.9	667.5	668.7	669.9	671.1	672.2
47.5°	623.3	627.5	631.7	634.4	635.9	637.3	638.7	640.1
50°	599.8	604.5	609.2	612.3	613.7	615.2	616.6	618.0
52.5°	576.0	580.7	585.4	588.5	589.9	591.3	592.7	594.2
55°	540.2	545.0	549.7	552.8	554.2	555.6	557.0	558.4
57.5°	502.7	508.3	513.9	517.4	518.7	520.0	521.4	522.7
60°	476.8	482.2	487.6	491.3	493.2	495.1	497.0	498.9
62.5°	451.2	456.7	462.1	465.8	467.7	469.6	471.4	473.3
65°	411.8	417.7	423.6	427.5	429.4	431.3	433.1	435.0
67.5°	373.0	379.0	385.0	388.9	390.8	392.6	394.5	396.3
70°	345.7	352.1	358.5	362.5	364.1	365.8	367.4	369.1
72.5°	319.8	326.0	332.2	336.2	338.0	339.9	341.7	343.6
75°	280.2	286.8	293.5	297.8	300.0	302.1	304.2	306.3
77.5°	243.4	250.1	256.8	261.3	263.6	265.8	268.1	270.4
80°	219.5	226.6	233.7	238.1	240.0	241.9	243.8	245.7
82.5°	196.0	203.3	210.6	215.3	217.3	219.4	221.5	223.6
85°	163.1	170.2	177.3	182.0	184.4	186.7	189.1	191.5
87.5°	142.6	149.9	157.1	161.9	164.1	166.3	168.5	170.7
90°	156.2	165.1	173.9	179.6	182.2	184.8	187.3	189.9
92.5°	175.7	183.5	191.4	196.5	198.8	201.1	203.4	205.7
95°	221.9	229.3	236.7	241.4	243.6	245.7	247.8	250.0
97.5°	282.0	289.4	296.8	301.5	303.5	305.6	307.6	309.6
100°	325.6	332.7	339.7	344.1	345.8	347.4	349.1	350.7
102.5°	372.2	379.3	386.5	391.1	393.2	395.3	397.4	399.5
105°	442.9	449.8	456.7	461.6	464.5	467.4	470.3	473.2
107.5°	520.5	527.3	534.0	538.2	539.9	541.5	543.1	544.8
110°	572.3	577.0	581.8	585.6	588.5	591.4	594.3	597.2



TEST NUMBER: P332802

CATALOG NUMBER: S124DIW-S795D1560U835-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	627.8	632.9	638.0	641.6	643.7	645.8	647.9	650.0
115°	714.1	719.0	723.9	726.9	728.3	729.6	730.9	732.2
117.5°	796.3	800.1	803.9	806.4	807.6	808.8	810.1	811.3
120°	852.2	855.2	858.3	861.1	863.6	866.2	868.7	871.3
122.5°	909.3	912.9	916.5	918.5	919.0	919.5	920.0	920.5
125°	993.4	997.2	1001.0	1003.3	1004.1	1004.8	1005.6	1006.3
127.5°	1072.5	1076.1	1079.7	1082.0	1083.1	1084.1	1085.2	1086.3
130°	1128.5	1132.1	1135.7	1137.5	1137.6	1137.7	1137.8	1137.9
132.5°	1181.5	1184.9	1188.2	1190.4	1191.3	1192.2	1193.0	1193.9
135°	1259.8	1262.9	1266.0	1267.7	1268.2	1268.6	1269.0	1269.4
137.5°	1336.4	1339.0	1341.6	1343.6	1345.0	1346.3	1347.7	1349.1
140°	1387.3	1390.0	1392.8	1394.5	1395.4	1396.2	1397.1	1397.9
142.5°	1436.0	1438.6	1441.3	1443.0	1444.0	1444.9	1445.8	1446.8
145°	1510.0	1511.1	1512.2	1512.7	1512.6	1512.6	1512.5	1512.4
147.5°	1577.3	1577.3	1577.2	1577.4	1577.8	1578.2	1578.6	1579.0
150°	1620.9	1620.9	1620.9	1620.8	1620.4	1620.1	1619.8	1619.4
152.5°	1662.3	1663.1	1663.9	1663.9	1663.0	1662.2	1661.3	1660.4
155°	1720.1	1721.4	1722.8	1722.8	1721.4	1720.1	1718.8	1717.4
157.5°	1771.0	1772.0	1773.0	1772.9	1771.8	1770.7	1769.5	1768.4
160°	1802.4	1803.4	1804.4	1804.0	1802.4	1800.7	1799.0	1797.3
162.5°	1830.5	1832.3	1834.1	1834.2	1832.5	1830.9	1829.2	1827.5
165°	1867.7	1869.7	1871.7	1872.1	1870.7	1869.4	1868.0	1866.7
167.5°	1899.1	1901.1	1903.1	1903.1	1901.0	1898.9	1896.8	1894.7
170°	1916.0	1918.0	1920.0	1919.8	1917.5	1915.1	1912.8	1910.4
172.5°	1928.6	1930.8	1933.1	1933.1	1930.7	1928.4	1926.0	1923.7
175°	1942.3	1944.6	1947.0	1947.0	1944.6	1942.3	1939.9	1937.6
177.5°	1949.8	1951.6	1953.5	1953.4	1951.2	1949.1	1947.0	1944.8
180°	1949.6	1949.6	1949.6	1949.6	1949.6	1949.6	1949.6	1949.6

(END OF REPORT)