

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: P333066-830

Luminaire Tested: **S124RDIW-S795D1050U830-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P333066-830  
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: S124RDIW-S795D1050U830-4F0-1E-UDD-F1  
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 795 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED  
HOUSING  
UPLIGHT 1050 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6454.1 lumens  
Efficiency: N/A  
Efficacy: 122.7 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24  
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')  
CIE Type: General Diffuse

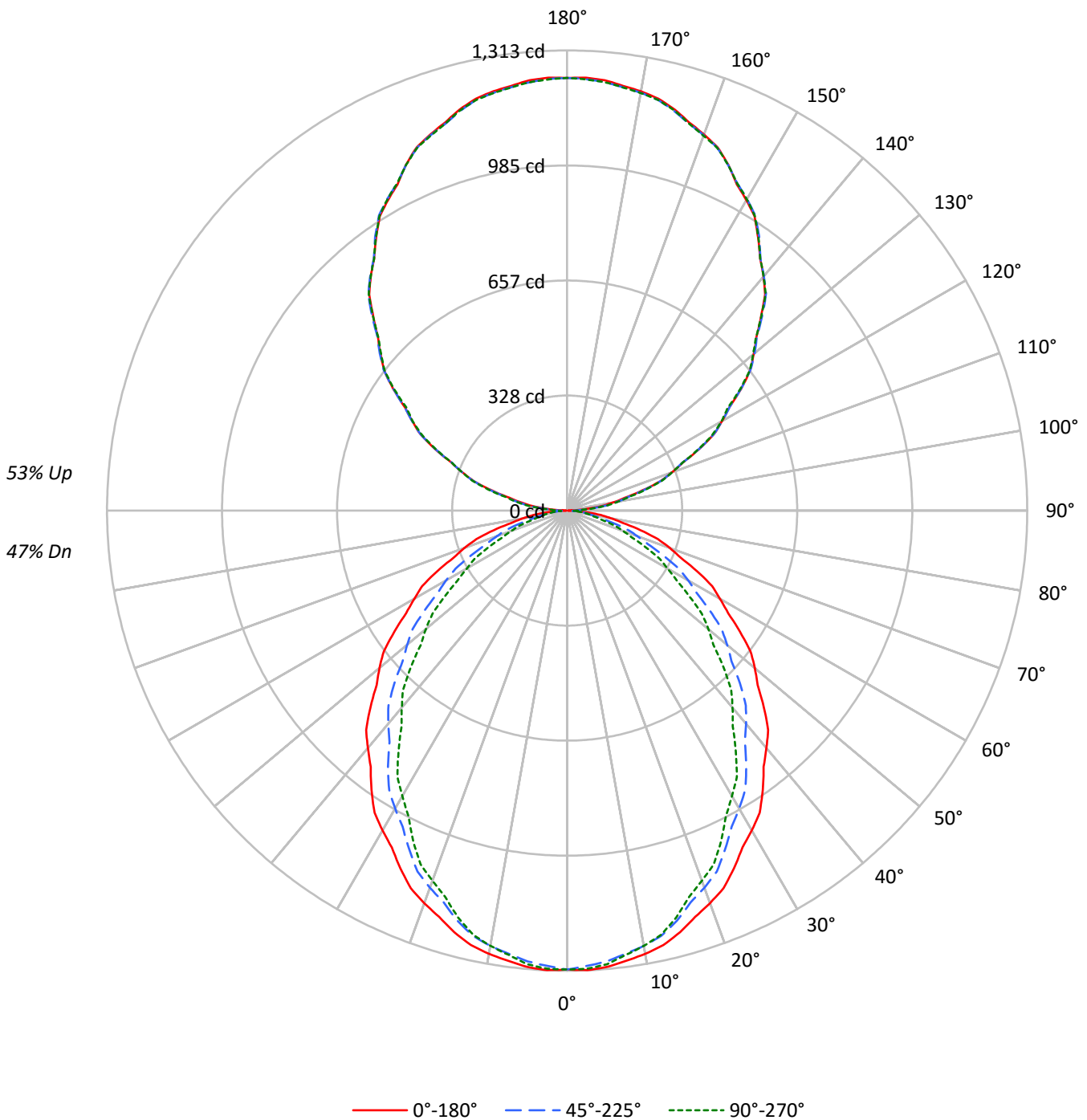
Input Watts (W): 52.6  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	106	106	106	106	98	98	98	98	82	82	82	67	67	67	53	53	53	47
1	97	93	89	86	89	86	83	80	72	70	68	59	58	56	47	46	45	40
2	89	82	76	71	81	75	70	66	63	60	56	52	50	47	42	40	39	34
3	81	72	65	59	74	66	60	55	56	51	48	46	43	40	37	35	33	29
4	74	64	56	50	68	59	52	47	50	45	41	41	38	35	34	31	29	25
5	68	57	49	43	63	53	46	40	45	39	35	37	33	30	30	28	25	22
6	63	51	43	37	58	47	40	35	40	35	31	34	30	26	28	25	22	19
7	58	46	38	33	53	43	36	31	37	31	27	31	27	24	25	22	20	17
8	54	42	34	29	50	39	32	27	33	28	24	28	24	21	23	20	18	15
9	50	38	31	26	46	36	29	25	31	25	22	26	22	19	22	18	16	14
10	47	35	28	23	43	33	26	22	28	23	20	24	20	17	20	17	15	13

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

	0°	45°	90°
0°	10571	10571	10571
5°	10594	10464	10529
10°	10528	10339	10339
15°	10407	10122	10046
20°	10241	9836	9655
25°	10029	9502	9260
30°	9822	9149	8766
35°	9594	8784	8270
40°	9319	8368	7734
45°	9065	7955	7188
50°	8776	7479	6610
55°	8466	6984	5983
60°	8126	6442	5341
65°	7815	5765	4713
70°	7360	5016	4001
75°	6784	4161	3250
80°	5918	3166	2985
85°	5011	2881	2686



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	123.0	1.9
10°-20°	343.0	5.3
20°-30°	495.3	7.7
30°-40°	561.4	8.7
40°-50°	542.1	8.4
50°-60°	450.8	7.0
60°-70°	311.3	4.8
70°-80°	157.8	2.4
80°-90°	44.2	0.7
90°-100°	81.4	1.3
100°-110°	241.2	3.7
110°-120°	409.4	6.3
120°-130°	539.9	8.4
130°-140°	606.3	9.4
140°-150°	595.8	9.2
150°-160°	501.1	7.8
160°-170°	333.4	5.2
170°-180°	116.7	1.8
0°-30°	961.2	14.9
0°-40°	1522.6	23.6
0°-60°	2515.6	39.0
0°-90°	3028.8	46.9
90°-120°	732.1	11.3
90°-150°	2474.1	38.3
90°-180°	3425.0	53.1
0°-180°	6454.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1309	1309	1309	1309	1309	
5°	1307	1303	1291	1301	1299	124
15°	1245	1235	1211	1209	1202	351
25°	1126	1106	1067	1050	1040	519
35°	974	940	891	858	839	608
45°	794	756	697	649	630	612
55°	602	560	496	446	425	538
65°	409	365	302	260	247	404
75°	218	180	133	111	104	230
85°	54	35	31	29	29	61
90°	3	13	21	27	29	6
95°	57	66	73	75	75	64
105°	222	224	227	230	233	236
115°	416	416	414	413	412	410
125°	606	606	605	603	602	540
135°	782	787	788	786	783	605
145°	950	954	955	954	951	594
155°	1088	1088	1088	1091	1088	501
165°	1185	1182	1180	1185	1182	334
175°	1233	1228	1227	1233	1227	117
180°	1235	1235	1235	1235	1235	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1309.4	1309.4	1309.4	1309.4	1309.4	1309.4	1309.4	1309.4	1309.4	1309.4	1309.4
2.5°	1312.6	1311.8	1311.1	1310.4	1309.7	1308.3	1306.4	1304.5	1302.5	1300.5	1302.5
5°	1307.3	1306.5	1305.5	1304.7	1303.7	1302.0	1299.3	1296.7	1293.9	1291.3	1293.5
7.5°	1295.5	1294.6	1293.6	1292.7	1291.8	1289.6	1286.1	1282.6	1279.1	1275.6	1277.1
10°	1284.3	1283.2	1282.0	1280.9	1279.8	1277.2	1273.3	1269.2	1265.3	1261.2	1262.1
12.5°	1269.8	1268.6	1267.2	1265.9	1264.7	1261.7	1257.0	1252.2	1247.5	1242.7	1243.3
15°	1245.2	1243.2	1241.1	1239.2	1237.2	1233.4	1227.8	1222.2	1216.6	1211.1	1210.6
17.5°	1215.3	1212.4	1209.5	1206.6	1203.7	1198.9	1192.2	1185.5	1178.8	1172.1	1170.9
20°	1192.0	1189.1	1186.3	1183.4	1180.4	1175.3	1167.6	1160.1	1152.4	1144.9	1143.1
22.5°	1166.4	1163.1	1159.9	1156.6	1153.4	1147.6	1139.5	1131.4	1123.3	1115.2	1112.6
25°	1125.9	1121.8	1117.9	1113.8	1109.8	1103.2	1094.1	1085.0	1075.8	1066.7	1062.9
27.5°	1083.4	1078.4	1073.3	1068.3	1063.2	1055.8	1046.0	1036.3	1026.5	1016.8	1012.1
30°	1053.7	1048.1	1042.5	1037.0	1031.4	1023.4	1013.0	1002.5	991.9	981.5	975.9
32.5°	1022.4	1016.2	1009.8	1003.5	997.3	988.7	977.9	967.0	956.2	945.4	939.0
35°	973.5	966.4	959.2	952.1	945.0	935.9	924.7	913.5	902.4	891.3	883.7
37.5°	921.1	913.8	906.4	899.1	891.7	881.9	869.6	857.2	844.9	832.5	824.1
40°	884.3	876.9	869.6	862.2	854.9	844.8	832.1	819.4	806.7	794.0	784.7
42.5°	848.9	841.2	833.6	825.9	818.1	807.7	794.5	781.2	768.0	754.7	745.2
45°	794.0	785.8	777.5	769.3	761.0	750.3	736.9	723.5	710.1	696.8	685.9
47.5°	737.3	728.8	720.3	711.7	703.2	692.0	678.2	664.2	650.4	636.4	625.1
50°	698.8	690.1	681.4	672.7	664.0	652.5	638.3	624.1	609.7	595.5	584.4
52.5°	659.5	651.0	642.4	634.0	625.5	613.9	599.3	584.7	570.0	555.4	544.1
55°	601.5	592.6	583.7	574.8	565.9	554.2	539.7	525.2	510.8	496.2	484.7
57.5°	544.2	534.9	525.7	516.4	507.1	495.3	481.1	466.8	452.6	438.3	426.6
60°	503.3	494.4	485.5	476.5	467.6	456.1	441.8	427.5	413.3	399.0	387.4
62.5°	466.4	457.1	447.9	438.6	429.3	417.4	402.7	388.1	373.5	358.9	348.2
65°	409.1	399.4	389.8	380.3	370.7	358.8	344.5	330.3	316.0	301.8	292.2
67.5°	349.5	340.4	331.1	322.0	312.7	301.6	288.3	275.1	261.8	248.6	240.3
70°	311.8	302.5	293.0	283.7	274.4	263.3	250.6	237.9	225.3	212.5	205.2
72.5°	271.7	263.3	254.8	246.3	237.8	227.6	215.7	203.6	191.6	179.6	173.3
75°	217.5	209.3	201.0	192.8	184.5	175.2	164.8	154.3	143.8	133.4	128.2
77.5°	162.6	155.6	148.6	141.7	134.6	126.9	118.5	110.0	101.5	93.0	90.0
80°	127.3	120.8	114.4	107.9	101.5	94.9	88.2	81.5	74.8	68.1	67.5
82.5°	96.9	91.0	85.0	79.1	73.1	68.2	64.5	60.6	56.7	53.0	52.4
85°	54.1	49.7	45.2	40.8	36.3	33.7	33.1	32.4	31.8	31.1	30.6
87.5°	19.0	18.1	17.1	16.1	15.2	14.8	15.0	15.1	15.3	15.5	15.6
90°	2.8	5.2	7.5	9.9	12.2	14.2	15.9	17.6	19.3	21.0	22.2
92.5°	20.5	23.1	25.8	28.5	31.1	33.1	34.2	35.4	36.7	37.8	38.5
95°	57.3	59.2	61.1	63.1	64.9	66.6	68.1	69.6	71.1	72.6	73.2
97.5°	100.1	101.6	103.1	104.6	106.2	107.8	109.5	111.3	113.0	114.8	115.6
100°	133.7	134.5	135.3	136.2	137.0	138.5	140.3	142.2	144.2	146.1	146.5
102.5°	168.8	169.2	169.5	169.8	170.1	171.2	173.0	174.7	176.4	178.1	178.8
105°	222.4	222.7	222.9	223.1	223.3	223.9	224.7	225.6	226.4	227.2	227.9
107.5°	278.8	279.1	279.3	279.6	279.8	280.0	280.1	280.3	280.4	280.5	281.2
110°	317.0	317.4	317.8	318.3	318.7	318.8	318.8	318.4	318.2	317.9	317.5



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	356.8	356.8	356.9	356.9	357.0	356.9	356.6	356.2	355.8	355.4	355.3
115°	416.3	416.3	416.3	416.3	416.3	416.1	415.7	415.3	414.8	414.4	414.2
117.5°	472.5	472.6	472.8	473.0	473.2	473.1	472.8	472.5	472.2	471.8	471.2
120°	509.9	510.8	511.6	512.5	513.3	513.4	512.7	512.1	511.5	510.9	509.8
122.5°	548.8	549.2	549.5	549.9	550.2	550.3	549.9	549.6	549.3	549.0	548.3
125°	606.3	606.3	606.3	606.3	606.3	606.2	606.0	605.8	605.6	605.4	604.9
127.5°	658.5	659.1	659.7	660.3	661.0	661.2	660.8	660.4	660.2	659.8	659.4
130°	695.1	695.8	696.4	697.0	697.7	698.0	698.0	698.0	698.0	698.0	697.6
132.5°	732.5	733.0	733.5	734.0	734.4	734.5	734.4	734.2	734.1	733.9	733.5
135°	782.0	783.3	784.6	785.8	787.1	787.8	787.8	787.8	787.8	787.8	787.3
137.5°	835.8	836.4	837.1	837.6	838.2	838.7	839.1	839.4	839.7	840.1	839.5
140°	871.8	872.2	872.6	873.1	873.5	873.6	873.6	873.6	873.6	873.6	873.5
142.5°	904.7	905.0	905.5	905.9	906.3	906.4	906.3	906.1	906.0	905.8	905.7
145°	950.1	950.9	951.8	952.6	953.5	953.9	954.2	954.4	954.6	954.8	954.6
147.5°	995.1	996.2	997.2	998.2	999.2	999.7	999.5	999.3	999.1	998.9	998.8
150°	1022.7	1023.5	1024.4	1025.2	1026.1	1026.4	1026.4	1026.4	1026.4	1026.4	1026.4
152.5°	1048.6	1049.1	1049.6	1050.1	1050.7	1050.9	1051.1	1051.3	1051.5	1051.7	1052.2
155°	1088.5	1088.5	1088.5	1088.5	1088.5	1088.4	1088.2	1088.0	1087.8	1087.6	1088.4
157.5°	1122.1	1121.7	1121.3	1121.0	1120.6	1120.4	1120.3	1120.3	1120.2	1120.2	1120.9
160°	1142.0	1141.8	1141.5	1141.3	1141.1	1140.9	1140.7	1140.5	1140.3	1140.1	1140.7
162.5°	1160.3	1159.8	1159.2	1158.7	1158.1	1157.7	1157.5	1157.3	1157.1	1156.9	1158.0
165°	1185.0	1184.3	1183.6	1183.1	1182.4	1181.9	1181.5	1181.0	1180.6	1180.2	1181.5
167.5°	1203.8	1203.0	1202.1	1201.2	1200.3	1199.9	1200.0	1200.0	1200.0	1200.0	1201.3
170°	1214.6	1213.5	1212.4	1211.4	1210.3	1209.8	1210.1	1210.3	1210.5	1210.7	1212.0
172.5°	1222.2	1221.3	1220.4	1219.6	1218.6	1218.2	1218.2	1218.3	1218.3	1218.3	1219.8
175°	1232.7	1231.6	1230.6	1229.5	1228.4	1227.9	1227.6	1227.4	1227.2	1227.0	1228.4
177.5°	1236.1	1235.3	1234.4	1233.6	1232.8	1232.3	1232.3	1232.3	1232.3	1232.3	1233.5
180°	1234.6	1234.6	1234.6	1234.6	1234.6	1234.6	1234.6	1234.6	1234.6	1234.6	1234.6



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1309.4	1309.4	1309.4	1309.4	1309.4	1309.4	1309.4	1309.4
2.5°	1304.5	1306.4	1308.3	1309.3	1309.1	1308.9	1308.7	1308.5
5°	1295.7	1298.0	1300.2	1301.1	1300.6	1300.2	1299.8	1299.3
7.5°	1278.5	1280.0	1281.4	1281.7	1281.0	1280.3	1279.6	1278.8
10°	1263.0	1263.9	1264.8	1264.8	1263.9	1263.0	1262.1	1261.2
12.5°	1243.9	1244.3	1244.9	1244.5	1243.3	1242.1	1240.8	1239.5
15°	1210.2	1209.8	1209.3	1208.3	1206.7	1205.1	1203.6	1202.0
17.5°	1169.7	1168.5	1167.2	1165.4	1163.0	1160.6	1158.3	1155.9
20°	1141.3	1139.5	1137.7	1135.5	1132.6	1129.6	1126.7	1123.9
22.5°	1109.9	1107.2	1104.6	1102.0	1099.7	1097.3	1095.0	1092.6
25°	1059.1	1055.4	1051.6	1048.6	1046.3	1044.1	1041.9	1039.6
27.5°	1007.4	1002.8	998.1	994.1	990.9	987.7	984.5	981.3
30°	970.3	964.8	959.2	954.6	951.1	947.5	944.0	940.4
32.5°	932.5	926.0	919.5	914.6	911.3	907.9	904.5	901.1
35°	876.1	868.6	861.0	855.2	851.2	847.2	843.1	839.1
37.5°	815.6	807.1	798.6	792.4	788.4	784.4	780.4	776.4
40°	775.3	765.9	756.6	749.9	745.9	741.9	737.9	733.9
42.5°	735.7	726.1	716.6	709.7	705.5	701.3	697.2	693.0
45°	675.0	664.0	653.1	645.6	641.6	637.6	633.6	629.6
47.5°	613.8	602.5	591.2	583.2	578.9	574.5	570.0	565.6
50°	573.3	562.1	550.9	543.3	539.0	534.8	530.6	526.3
52.5°	532.8	521.5	510.1	502.3	497.9	493.4	489.1	484.7
55°	473.1	461.5	450.0	442.1	437.8	433.6	429.3	425.1
57.5°	414.8	403.0	391.2	383.8	380.6	377.4	374.2	371.0
60°	375.9	364.3	352.7	345.1	341.6	338.0	334.4	330.8
62.5°	337.5	326.9	316.1	309.3	306.5	303.7	300.8	297.9
65°	282.6	273.1	263.4	257.3	254.7	251.9	249.3	246.7
67.5°	232.1	223.9	215.7	210.1	207.2	204.2	201.2	198.3
70°	197.8	190.5	183.1	178.3	176.2	173.9	171.6	169.5
72.5°	167.1	160.8	154.5	150.3	148.4	146.3	144.2	142.1
75°	123.1	118.0	112.8	109.6	108.3	107.0	105.6	104.2
77.5°	87.1	84.1	81.1	79.4	79.0	78.6	78.2	77.8
80°	66.8	66.2	65.5	65.0	64.8	64.6	64.4	64.2
82.5°	51.9	51.5	51.0	50.6	50.4	50.1	50.0	49.8
85°	30.2	29.8	29.3	29.0	29.0	29.0	29.0	29.0
87.5°	15.6	15.6	15.7	15.9	16.2	16.4	16.7	17.0
90°	23.6	24.8	26.1	27.0	27.3	27.8	28.2	28.7
92.5°	39.3	40.1	40.9	41.4	41.7	41.8	42.1	42.4
95°	73.8	74.5	75.1	75.4	75.4	75.4	75.4	75.4
97.5°	116.3	117.1	117.8	118.2	118.2	118.2	118.2	118.2
100°	146.9	147.3	147.8	148.0	148.0	148.0	148.0	148.0
102.5°	179.4	179.9	180.6	181.0	181.1	181.3	181.4	181.6
105°	228.6	229.1	229.8	230.5	231.1	231.7	232.3	233.0
107.5°	281.7	282.3	283.0	283.1	283.1	283.1	283.0	283.0
110°	317.1	316.7	316.2	316.4	317.0	317.6	318.3	319.0





TEST NUMBER: P333066-830

CATALOG NUMBER: S124RDIW-S795D1050U830-4F0-1E-UDD-F1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	355.2	355.2	355.1	355.1	355.2	355.3	355.4	355.6
115°	414.0	413.8	413.6	413.3	413.1	412.9	412.7	412.5
117.5°	470.4	469.7	469.0	468.4	468.0	467.6	467.1	466.7
120°	508.7	507.7	506.6	506.2	506.7	507.1	507.6	507.9
122.5°	547.6	546.9	546.1	545.4	544.6	543.8	543.1	542.3
125°	604.5	604.1	603.7	603.2	602.9	602.4	602.0	601.5
127.5°	658.9	658.6	658.1	657.7	657.3	657.0	656.7	656.4
130°	697.1	696.7	696.3	695.7	694.8	694.0	693.1	692.3
132.5°	733.0	732.6	732.2	731.8	731.5	731.1	730.8	730.5
135°	786.9	786.5	786.1	785.5	784.9	784.2	783.6	783.0
137.5°	839.0	838.4	837.8	837.6	837.7	837.9	838.0	838.1
140°	873.3	873.1	872.8	872.6	872.4	872.2	871.9	871.8
142.5°	905.7	905.6	905.6	905.5	905.5	905.5	905.4	905.4
145°	954.4	954.2	953.9	953.6	952.9	952.3	951.7	951.0
147.5°	998.6	998.4	998.2	998.1	997.9	997.7	997.4	997.2
150°	1026.4	1026.4	1026.4	1026.3	1026.1	1026.0	1025.7	1025.5
152.5°	1052.6	1053.2	1053.7	1053.7	1053.1	1052.5	1052.0	1051.5
155°	1089.3	1090.1	1091.0	1091.0	1090.1	1089.3	1088.4	1087.6
157.5°	1121.5	1122.1	1122.8	1122.8	1122.0	1121.2	1120.6	1119.8
160°	1141.3	1142.0	1142.6	1142.4	1141.3	1140.3	1139.3	1138.1
162.5°	1159.1	1160.3	1161.5	1161.5	1160.5	1159.4	1158.3	1157.3
165°	1182.7	1184.0	1185.2	1185.4	1184.6	1183.7	1182.9	1182.0
167.5°	1202.6	1203.8	1205.1	1205.1	1203.8	1202.5	1201.2	1199.9
170°	1213.2	1214.6	1215.8	1215.7	1214.3	1212.8	1211.3	1209.8
172.5°	1221.3	1222.7	1224.2	1224.1	1222.7	1221.2	1219.7	1218.1
175°	1229.9	1231.4	1232.9	1232.9	1231.4	1229.9	1228.4	1227.0
177.5°	1234.7	1235.9	1237.1	1237.0	1235.6	1234.3	1232.9	1231.5
180°	1234.6	1234.6	1234.6	1234.6	1234.6	1234.6	1234.6	1234.6

(END OF REPORT)