

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: P333065-830

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P333065-830
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-6,
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-F
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, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6978.3 lumens
Efficiency: N/A
Efficacy: 132.7 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

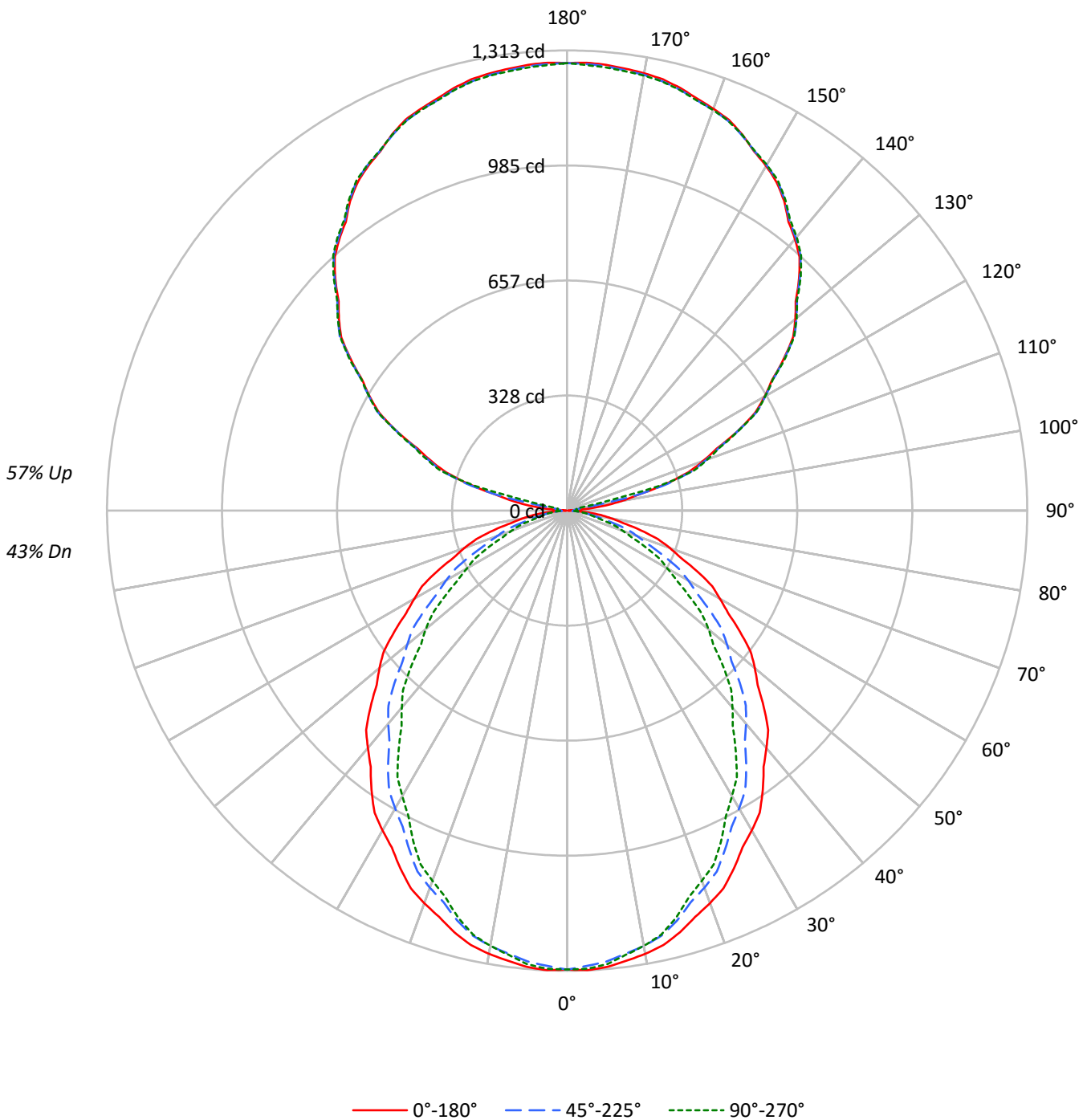
Input Watts (W): 52.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P333065-830

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

Luminous Intensity Polar Plot





TEST NUMBER: P333065-830

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

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20
RC	80				70				50				30				10
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	106	106	106	106	97	97	97	97	80	80	80	64	64	64	50	50	50
1	97	92	89	85	88	85	81	79	70	68	66	57	55	54	45	44	43
2	88	81	75	70	80	74	69	65	62	58	55	50	48	45	40	38	36
3	80	71	64	58	73	65	59	54	55	50	46	45	41	39	35	33	31
4	74	63	55	50	67	58	51	46	49	44	40	40	36	33	32	29	27
5	68	56	48	43	62	52	45	40	44	38	34	36	32	29	29	26	24
6	62	51	43	37	57	47	40	35	39	34	30	32	28	25	26	23	21
7	58	46	38	32	53	42	35	30	36	30	26	29	25	22	24	21	19
8	53	41	34	29	49	38	32	27	33	27	23	27	23	20	22	19	17
9	50	38	30	26	46	35	29	24	30	25	21	25	21	18	20	17	15
10	47	35	28	23	43	32	26	22	27	22	19	23	19	16	19	16	14

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



TEST NUMBER: P333065-830

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

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	123.0	1.8
10°-20°	343.0	4.9
20°-30°	495.3	7.1
30°-40°	561.4	8.0
40°-50°	542.1	7.8
50°-60°	450.8	6.5
60°-70°	311.3	4.5
70°-80°	157.8	2.3
80°-90°	44.2	0.6
90°-100°	43.7	0.6
100°-110°	278.4	4.0
110°-120°	532.6	7.6
120°-130°	676.2	9.7
130°-140°	723.4	10.4
140°-150°	676.5	9.7
150°-160°	545.5	7.8
160°-170°	351.9	5.0
170°-180°	121.3	1.7
0°-30°	961.2	13.8
0°-40°	1522.6	21.8
0°-60°	2515.6	36.0
0°-90°	3028.8	43.4
90°-120°	854.7	12.2
90°-150°	2930.8	42.0
90°-180°	3949.0	56.6
0°-180°	6978.3	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	5
95°	52	22	21	26	28	68
105°	288	293	298	304	272	301
115°	537	539	539	540	540	528
125°	754	758	756	759	760	673
135°	936	935	939	941	942	721
145°	1079	1082	1082	1083	1085	674
155°	1183	1184	1181	1185	1182	545
165°	1248	1244	1243	1250	1242	353
175°	1277	1271	1272	1280	1269	122
180°	1277	1277	1277	1277	1277	



TEST NUMBER: P333065-830

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

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°	12.1	12.2	12.3	12.4	12.5	13.5	15.2	16.9	18.6	20.3	21.5
95°	52.5	45.3	38.1	30.9	23.7	20.2	20.4	20.5	20.8	21.0	22.2
97.5°	111.5	116.0	120.6	125.1	129.5	120.0	96.2	72.6	48.9	25.2	25.4
100°	156.7	160.4	164.3	168.1	171.9	159.2	129.9	100.6	71.4	42.0	38.5
102.5°	207.1	209.8	212.6	215.5	218.2	217.7	214.0	210.1	206.2	202.5	163.5
105°	287.5	288.7	290.0	291.2	292.6	293.7	294.7	295.9	296.9	297.9	299.8
107.5°	362.1	362.8	363.4	364.0	364.7	365.7	367.1	368.6	370.0	371.5	372.4
110°	412.6	413.2	413.8	414.4	415.1	416.0	417.4	418.6	419.9	421.1	421.6



TEST NUMBER: P333065-830

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

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	461.5	462.6	463.7	464.9	466.0	466.9	467.5	468.1	468.6	469.3	469.2
115°	536.7	537.3	538.0	538.6	539.2	539.4	539.2	539.0	538.9	538.6	539.0
117.5°	604.5	605.3	606.1	607.0	607.8	608.5	609.0	609.4	609.9	610.4	610.3
120°	650.4	651.2	652.1	652.9	653.7	654.0	653.8	653.7	653.4	653.2	653.7
122.5°	693.1	693.6	694.1	694.7	695.1	695.6	695.9	696.2	696.4	696.7	697.0
125°	754.4	755.3	756.1	757.0	757.8	758.0	757.6	757.1	756.8	756.3	757.0
127.5°	812.5	812.7	812.9	813.1	813.3	813.9	814.9	815.9	816.8	817.8	817.7
130°	849.9	850.2	850.4	850.6	850.7	851.2	851.9	852.4	853.1	853.8	853.9
132.5°	884.3	884.7	885.0	885.4	885.8	886.5	887.2	888.1	888.8	889.7	889.9
135°	935.9	935.7	935.5	935.2	935.0	935.4	936.2	937.1	937.9	938.8	939.1
137.5°	981.5	981.6	981.7	981.8	981.8	982.3	983.3	984.2	985.1	986.1	986.6
140°	1011.3	1011.7	1012.2	1012.6	1013.0	1013.4	1013.9	1014.3	1014.7	1015.1	1015.8
142.5°	1038.0	1038.8	1039.5	1040.4	1041.1	1041.6	1041.9	1042.1	1042.4	1042.6	1043.1
145°	1079.1	1079.8	1080.3	1081.0	1081.7	1081.9	1081.9	1081.9	1081.9	1081.9	1082.2
147.5°	1111.7	1113.0	1114.2	1115.3	1116.5	1117.0	1116.8	1116.6	1116.3	1116.2	1116.3
150°	1135.5	1136.3	1137.2	1138.0	1138.9	1139.2	1139.0	1138.8	1138.5	1138.3	1138.3
152.5°	1155.3	1156.0	1156.7	1157.3	1158.0	1158.2	1157.8	1157.4	1157.1	1156.7	1157.0
155°	1183.2	1183.5	1183.6	1183.8	1184.0	1183.8	1183.2	1182.6	1181.9	1181.3	1182.1
157.5°	1206.7	1206.5	1206.5	1206.3	1206.2	1205.8	1205.0	1204.3	1203.6	1202.9	1204.0
160°	1220.4	1219.8	1219.2	1218.5	1217.9	1217.5	1217.3	1217.0	1216.8	1216.6	1217.9
162.5°	1232.7	1231.9	1231.1	1230.2	1229.5	1228.9	1228.7	1228.5	1228.3	1228.0	1229.4
165°	1248.1	1247.1	1246.0	1244.9	1243.9	1243.4	1243.4	1243.4	1243.4	1243.4	1245.1
167.5°	1260.4	1259.2	1258.2	1257.1	1255.9	1255.4	1255.2	1255.1	1255.0	1254.8	1256.7
170°	1267.2	1265.9	1264.7	1263.4	1262.2	1261.6	1261.8	1262.1	1262.3	1262.4	1264.1
172.5°	1271.8	1270.5	1269.2	1268.0	1266.7	1266.2	1266.4	1266.6	1266.9	1267.1	1268.8
175°	1276.8	1275.5	1274.2	1273.0	1271.7	1271.2	1271.4	1271.6	1271.8	1272.1	1273.9
177.5°	1279.0	1277.9	1276.7	1275.5	1274.3	1273.9	1274.2	1274.6	1274.9	1275.3	1276.6
180°	1276.8	1276.8	1276.8	1276.8	1276.8	1276.8	1276.8	1276.8	1276.8	1276.8	1276.8



TEST NUMBER: P333065-830

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

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°	22.8	24.0	25.4	26.0	26.1	26.2	26.3	26.4
95°	23.6	24.8	26.1	26.9	27.1	27.2	27.5	27.7
97.5°	25.4	25.6	25.7	25.9	26.1	26.3	26.5	26.8
100°	34.8	31.2	27.6	25.9	26.1	26.3	26.5	26.8
102.5°	124.6	85.7	46.8	27.3	27.3	27.4	27.4	27.5
105°	301.8	303.7	305.6	302.7	295.1	287.5	279.8	272.2
107.5°	373.3	374.3	375.2	376.1	376.9	377.7	378.5	379.3
110°	422.0	422.4	422.8	423.4	424.0	424.6	425.3	425.9



TEST NUMBER: P333065-830

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

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	469.1	469.0	468.9	469.3	470.1	470.9	471.7	472.5
115°	539.4	539.9	540.3	540.5	540.5	540.5	540.5	540.5
117.5°	610.2	610.2	610.1	610.0	609.9	609.8	609.7	609.6
120°	654.0	654.5	654.9	654.9	654.5	654.0	653.7	653.2
122.5°	697.3	697.5	697.8	697.7	697.3	696.8	696.4	696.0
125°	757.6	758.3	758.8	759.3	759.5	759.7	760.0	760.2
127.5°	817.6	817.5	817.3	817.2	817.0	816.8	816.6	816.5
130°	854.1	854.4	854.6	854.7	854.7	854.7	854.7	854.7
132.5°	890.0	890.3	890.5	890.5	890.3	890.1	890.0	889.9
135°	939.6	940.0	940.5	940.8	941.3	941.7	942.2	942.5
137.5°	987.0	987.5	988.0	988.2	988.0	987.9	987.8	987.6
140°	1016.4	1017.0	1017.7	1018.1	1018.3	1018.5	1018.7	1019.0
142.5°	1043.6	1044.1	1044.5	1044.7	1044.8	1044.8	1044.9	1044.9
145°	1082.4	1082.6	1082.8	1083.2	1083.5	1084.0	1084.4	1084.9
147.5°	1116.5	1116.6	1116.8	1117.0	1117.3	1117.5	1117.7	1117.9
150°	1138.3	1138.3	1138.3	1138.4	1138.6	1138.9	1139.1	1139.3
152.5°	1157.3	1157.6	1158.0	1158.1	1158.0	1157.8	1157.7	1157.6
155°	1183.0	1183.8	1184.7	1184.8	1184.1	1183.6	1182.9	1182.2
157.5°	1205.0	1206.2	1207.3	1207.3	1206.2	1205.0	1204.0	1202.9
160°	1219.2	1220.4	1221.7	1221.7	1220.4	1219.2	1217.9	1216.6
162.5°	1230.6	1231.9	1233.1	1233.1	1231.6	1230.2	1228.8	1227.3
165°	1246.8	1248.5	1250.2	1250.0	1248.1	1246.2	1244.3	1242.4
167.5°	1258.6	1260.5	1262.3	1262.2	1260.1	1257.9	1255.8	1253.7
170°	1265.8	1267.5	1269.2	1269.0	1266.9	1264.8	1262.6	1260.6
172.5°	1270.5	1272.1	1273.8	1273.6	1271.2	1268.9	1266.7	1264.3
175°	1275.8	1277.7	1279.7	1279.3	1276.8	1274.2	1271.7	1269.1
177.5°	1278.0	1279.3	1280.7	1280.3	1278.3	1276.3	1274.2	1272.2
180°	1276.8	1276.8	1276.8	1276.8	1276.8	1276.8	1276.8	1276.8

(END OF REPORT)