

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: P333069-927

Luminaire Tested: **S124RDIW-S795D1340U927-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P333069-927
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-S795D1340U927-4F0-1E-UDD-F
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 795 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 1340 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6796.0 lumens
Efficiency: N/A
Efficacy: 110.7 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: Semi-Indirect

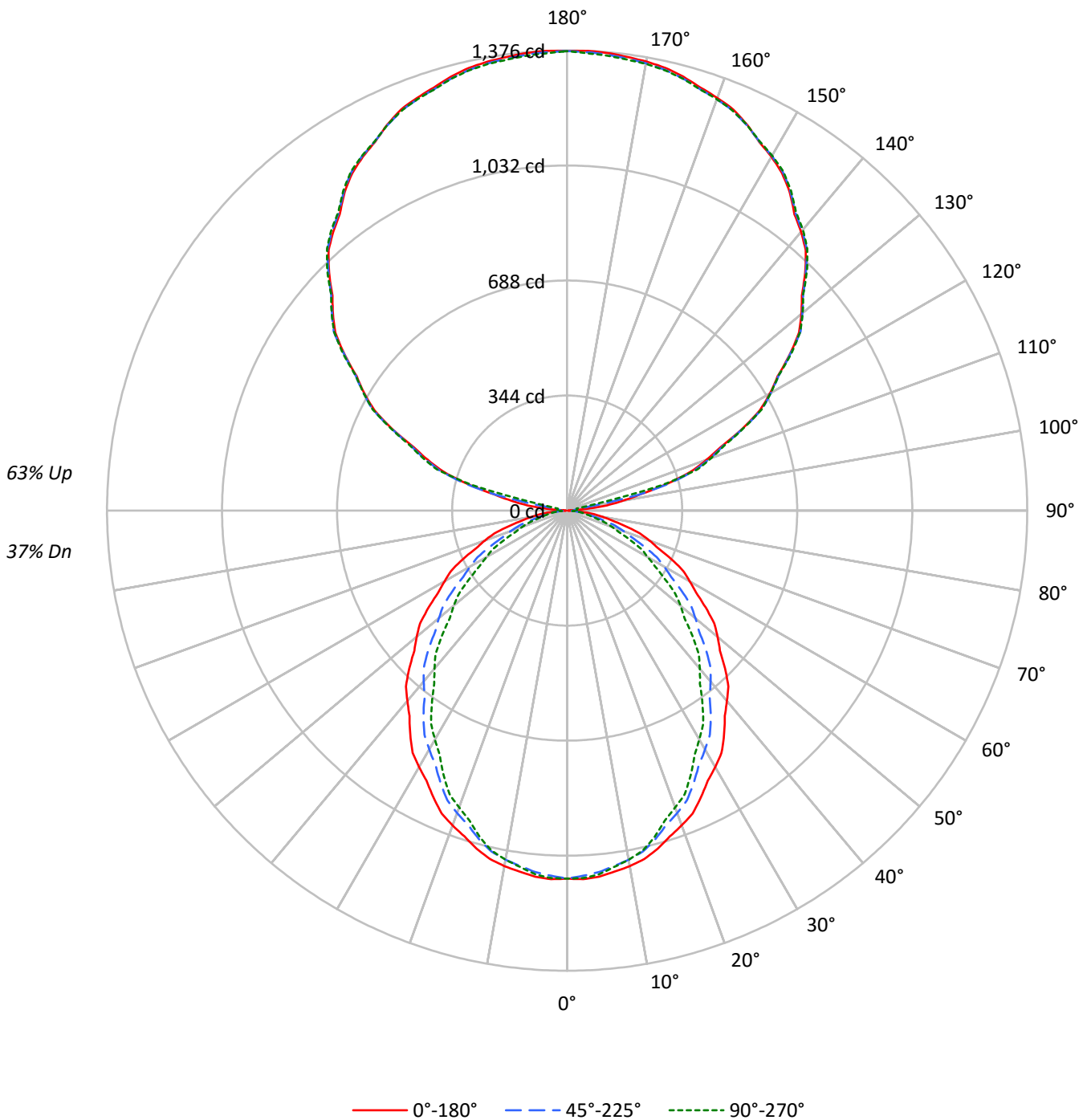
Input Watts (W): 61.4
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	104	104	104	104	94	94	94	94	76	76	76	60	60	60	45	45	45	37
1	95	91	87	84	86	83	80	77	67	65	63	53	51	50	40	39	38	32
2	87	80	74	69	79	72	67	63	59	55	52	47	44	42	35	34	32	27
3	79	70	63	57	72	64	58	53	52	48	44	41	38	36	31	29	28	23
4	73	62	54	49	66	57	50	45	46	42	38	37	34	31	28	26	24	20
5	67	55	47	42	60	51	44	39	42	37	33	33	30	27	25	23	21	17
6	61	50	42	36	55	45	39	34	37	32	28	30	26	23	23	21	19	15
7	57	45	37	32	51	41	34	29	34	29	25	27	24	21	21	18	17	14
8	53	41	33	28	48	37	31	26	31	26	22	25	21	19	19	17	15	12
9	49	37	30	25	44	34	28	23	28	23	20	23	19	17	18	15	13	11
10	46	34	27	22	41	31	25	21	26	21	18	21	18	15	17	14	12	10

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8884	8884	8884
5°	8904	8795	8849
10°	8848	8689	8689
15°	8747	8507	8444
20°	8607	8267	8115
25°	8429	7986	7783
30°	8255	7690	7368
35°	8064	7383	6951
40°	7832	7032	6500
45°	7618	6687	6042
50°	7376	6286	5556
55°	7116	5871	5029
60°	6830	5414	4490
65°	6567	4846	3960
70°	6187	4216	3361
75°	5702	3497	2732
80°	4974	2664	2506
85°	4215	2418	2260



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	103.4	1.5
10°-20°	288.3	4.2
20°-30°	416.3	6.1
30°-40°	471.8	6.9
40°-50°	455.6	6.7
50°-60°	378.9	5.6
60°-70°	261.6	3.8
70°-80°	132.6	2.0
80°-90°	38.0	0.6
90°-100°	47.0	0.7
100°-110°	299.6	4.4
110°-120°	573.1	8.4
120°-130°	727.5	10.7
130°-140°	778.4	11.5
140°-150°	727.9	10.7
150°-160°	587.0	8.6
160°-170°	378.6	5.6
170°-180°	130.5	1.9
0°-30°	807.9	11.9
0°-40°	1279.7	18.8
0°-60°	2114.3	31.1
0°-90°	2546.5	37.5
90°-120°	919.7	13.5
90°-150°	3153.4	46.4
90°-180°	4250.0	62.5
0°-180°	6796.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1100	1100	1100	1100	1100	
5°	1099	1095	1085	1093	1092	104
15°	1047	1038	1018	1016	1010	295
25°	946	930	896	883	874	436
35°	818	790	749	721	705	511
45°	667	635	586	546	529	514
55°	506	471	417	375	357	452
65°	344	307	254	219	207	339
75°	183	151	112	93	88	193
85°	46	29	26	24	24	51
90°	3	14	23	29	31	5
95°	56	24	23	28	30	73
105°	309	315	321	327	293	324
115°	577	580	580	581	582	568
125°	812	816	814	817	818	724
135°	1007	1006	1010	1012	1014	776
145°	1161	1164	1164	1165	1167	725
155°	1273	1274	1271	1275	1272	587
165°	1343	1338	1338	1345	1337	379
175°	1374	1368	1369	1377	1366	131
180°	1374	1374	1374	1374	1374	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1100.5	1100.5	1100.5	1100.5	1100.5	1100.5	1100.5	1100.5	1100.5	1100.5	1100.5
2.5°	1103.2	1102.6	1101.9	1101.4	1100.7	1099.6	1098.0	1096.4	1094.7	1093.1	1094.7
5°	1098.8	1098.0	1097.3	1096.5	1095.7	1094.3	1092.0	1089.8	1087.5	1085.3	1087.2
7.5°	1088.9	1088.1	1087.3	1086.5	1085.7	1083.9	1080.9	1078.0	1075.1	1072.1	1073.3
10°	1079.4	1078.5	1077.5	1076.6	1075.6	1073.5	1070.2	1066.8	1063.4	1060.0	1060.7
12.5°	1067.2	1066.2	1065.1	1064.0	1063.0	1060.4	1056.5	1052.4	1048.5	1044.5	1045.0
15°	1046.6	1044.9	1043.1	1041.5	1039.8	1036.6	1031.9	1027.2	1022.5	1017.9	1017.5
17.5°	1021.4	1019.0	1016.5	1014.2	1011.7	1007.7	1002.0	996.4	990.8	985.2	984.1
20°	1001.9	999.4	997.0	994.6	992.1	987.8	981.4	975.0	968.6	962.3	960.8
22.5°	980.3	977.6	974.9	972.1	969.4	964.6	957.7	950.9	944.1	937.3	935.1
25°	946.3	942.9	939.5	936.1	932.8	927.2	919.6	911.9	904.2	896.5	893.3
27.5°	910.5	906.3	902.1	897.9	893.6	887.4	879.2	871.0	862.8	854.6	850.6
30°	885.6	880.9	876.2	871.6	866.9	860.2	851.4	842.6	833.7	824.9	820.2
32.5°	859.3	854.1	848.7	843.4	838.2	831.0	821.9	812.8	803.7	794.6	789.2
35°	818.2	812.2	806.2	800.2	794.2	786.6	777.2	767.8	758.4	749.1	742.8
37.5°	774.2	768.0	761.8	755.7	749.5	741.2	730.9	720.5	710.1	699.7	692.6
40°	743.2	737.0	730.9	724.7	718.5	710.0	699.3	688.7	678.0	667.3	659.5
42.5°	713.5	707.0	700.6	694.1	687.6	678.8	667.7	656.6	645.5	634.3	626.3
45°	667.3	660.4	653.5	646.6	639.6	630.6	619.3	608.1	596.8	585.7	576.5
47.5°	619.6	612.5	605.4	598.2	591.0	581.6	570.0	558.3	546.6	534.9	525.4
50°	587.3	580.0	572.7	565.4	558.1	548.4	536.5	524.5	512.5	500.5	491.2
52.5°	554.3	547.2	540.0	532.8	525.7	515.9	503.7	491.4	479.1	466.8	457.3
55°	505.6	498.0	490.6	483.1	475.6	465.8	453.6	441.4	429.3	417.1	407.3
57.5°	457.4	449.6	441.8	434.0	426.2	416.3	404.3	392.4	380.4	368.4	358.5
60°	423.0	415.5	408.1	400.5	393.0	383.3	371.3	359.3	347.4	335.3	325.6
62.5°	392.0	384.2	376.4	368.6	360.8	350.8	338.5	326.2	313.9	301.7	292.6
65°	343.8	335.7	327.6	319.6	311.6	301.6	289.5	277.6	265.6	253.7	245.6
67.5°	293.7	286.1	278.3	270.6	262.8	253.5	242.3	231.2	220.1	209.0	202.0
70°	262.1	254.2	246.3	238.4	230.6	221.3	210.6	199.9	189.3	178.6	172.5
72.5°	228.4	221.3	214.1	207.0	199.9	191.3	181.3	171.1	161.1	151.0	145.7
75°	182.8	175.9	169.0	162.1	155.1	147.3	138.5	129.7	120.9	112.1	107.7
77.5°	136.7	130.8	124.9	119.1	113.1	106.6	99.6	92.4	85.3	78.2	75.7
80°	107.0	101.6	96.2	90.7	85.3	79.8	74.1	68.5	62.9	57.3	56.7
82.5°	81.4	76.4	71.5	66.5	61.5	57.4	54.2	50.9	47.7	44.5	44.0
85°	45.5	41.7	38.0	34.3	30.5	28.4	27.8	27.3	26.7	26.1	25.7
87.5°	16.1	15.4	14.7	14.0	13.3	13.1	13.3	13.5	13.7	13.9	14.1
90°	3.1	5.6	8.1	10.6	13.2	15.3	17.1	18.9	20.8	22.6	24.0
92.5°	12.9	13.1	13.2	13.4	13.5	14.5	16.3	18.1	20.0	21.8	23.1
95°	56.5	48.7	41.0	33.2	25.4	21.7	21.9	22.2	22.3	22.6	24.0
97.5°	120.0	124.8	129.7	134.5	139.3	129.0	103.5	78.1	52.6	27.1	27.3
100°	168.5	172.6	176.7	180.9	185.0	171.3	139.7	108.2	76.7	45.2	41.4
102.5°	222.8	225.8	228.8	231.8	234.8	234.2	230.1	226.1	222.0	217.9	175.9
105°	309.3	310.6	312.0	313.4	314.7	316.0	317.2	318.3	319.4	320.6	322.7
107.5°	389.6	390.3	391.0	391.7	392.4	393.5	395.1	396.6	398.2	399.7	400.7
110°	443.9	444.6	445.3	445.9	446.6	447.7	449.0	450.4	451.8	453.1	453.6



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	496.5	497.7	499.0	500.2	501.5	502.3	503.0	503.7	504.3	504.9	504.9
115°	577.4	578.1	578.8	579.5	580.2	580.4	580.2	580.0	579.7	579.5	580.0
117.5°	650.4	651.3	652.2	653.2	654.0	654.7	655.3	655.8	656.2	656.8	656.7
120°	699.7	700.6	701.6	702.5	703.4	703.7	703.5	703.3	703.1	702.8	703.3
122.5°	745.8	746.3	746.9	747.4	748.0	748.4	748.7	749.0	749.3	749.6	750.0
125°	811.7	812.6	813.6	814.4	815.4	815.6	815.2	814.7	814.2	813.8	814.4
127.5°	874.2	874.4	874.6	874.9	875.1	875.8	876.8	877.8	878.9	880.0	879.8
130°	914.5	914.7	915.0	915.1	915.4	915.8	916.6	917.2	917.9	918.6	918.9
132.5°	951.5	951.9	952.3	952.7	953.1	953.8	954.7	955.5	956.3	957.2	957.4
135°	1006.9	1006.7	1006.5	1006.3	1006.1	1006.4	1007.3	1008.2	1009.2	1010.0	1010.5
137.5°	1056.1	1056.1	1056.2	1056.4	1056.5	1057.0	1058.0	1059.0	1060.0	1061.0	1061.5
140°	1088.1	1088.6	1089.0	1089.5	1090.0	1090.4	1090.8	1091.3	1091.8	1092.3	1092.9
142.5°	1116.9	1117.7	1118.6	1119.4	1120.2	1120.7	1121.0	1121.3	1121.6	1121.8	1122.4
145°	1161.1	1161.7	1162.4	1163.2	1163.8	1164.2	1164.2	1164.2	1164.2	1164.2	1164.4
147.5°	1196.2	1197.5	1198.8	1200.1	1201.3	1201.9	1201.7	1201.4	1201.2	1200.9	1201.1
150°	1221.7	1222.7	1223.5	1224.5	1225.3	1225.7	1225.5	1225.3	1225.0	1224.8	1224.8
152.5°	1243.1	1243.8	1244.5	1245.2	1246.0	1246.2	1245.8	1245.3	1244.9	1244.5	1244.9
155°	1273.1	1273.3	1273.5	1273.7	1274.0	1273.7	1273.1	1272.4	1271.7	1271.1	1271.9
157.5°	1298.4	1298.2	1298.1	1297.9	1297.8	1297.4	1296.6	1295.8	1295.1	1294.3	1295.5
160°	1313.1	1312.5	1311.8	1311.1	1310.4	1310.0	1309.7	1309.5	1309.2	1309.1	1310.4
162.5°	1326.3	1325.4	1324.6	1323.7	1322.9	1322.3	1322.1	1321.8	1321.6	1321.4	1322.7
165°	1343.0	1341.8	1340.7	1339.5	1338.4	1337.8	1337.8	1337.8	1337.8	1337.8	1339.7
167.5°	1356.1	1354.9	1353.8	1352.6	1351.4	1350.7	1350.6	1350.4	1350.3	1350.1	1352.2
170°	1363.5	1362.2	1360.7	1359.4	1358.0	1357.5	1357.6	1357.9	1358.1	1358.4	1360.2
172.5°	1368.4	1367.1	1365.7	1364.3	1362.9	1362.4	1362.6	1362.9	1363.0	1363.3	1365.1
175°	1373.8	1372.4	1371.0	1369.7	1368.3	1367.7	1367.9	1368.2	1368.4	1368.7	1370.7
177.5°	1376.3	1375.0	1373.6	1372.4	1371.1	1370.6	1371.0	1371.4	1371.7	1372.1	1373.6
180°	1373.8	1373.8	1373.8	1373.8	1373.8	1373.8	1373.8	1373.8	1373.8	1373.8	1373.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1100.5	1100.5	1100.5	1100.5	1100.5	1100.5	1100.5	1100.5
2.5°	1096.4	1098.0	1099.6	1100.4	1100.3	1100.1	1099.9	1099.8
5°	1089.0	1090.9	1092.8	1093.5	1093.1	1092.8	1092.4	1092.0
7.5°	1074.5	1075.8	1077.0	1077.2	1076.7	1076.0	1075.5	1074.8
10°	1061.5	1062.2	1063.0	1063.0	1062.2	1061.5	1060.7	1060.0
12.5°	1045.4	1045.8	1046.3	1046.0	1045.0	1043.9	1042.8	1041.8
15°	1017.2	1016.8	1016.4	1015.6	1014.2	1012.9	1011.6	1010.3
17.5°	983.1	982.1	981.0	979.5	977.5	975.5	973.5	971.5
20°	959.3	957.7	956.2	954.3	951.9	949.4	947.0	944.6
22.5°	932.9	930.6	928.4	926.2	924.2	922.3	920.3	918.3
25°	890.2	887.0	883.8	881.3	879.4	877.6	875.7	873.8
27.5°	846.7	842.8	838.8	835.5	832.8	830.1	827.4	824.7
30°	815.6	810.9	806.2	802.3	799.4	796.4	793.4	790.4
32.5°	783.7	778.3	772.9	768.7	765.9	763.0	760.2	757.3
35°	736.3	730.0	723.7	718.7	715.4	712.0	708.6	705.3
37.5°	685.5	678.3	671.2	666.0	662.7	659.3	655.9	652.5
40°	651.6	643.7	635.9	630.3	626.9	623.5	620.2	616.8
42.5°	618.3	610.3	602.3	596.5	592.9	589.5	586.0	582.4
45°	567.3	558.1	548.9	542.6	539.2	535.9	532.5	529.2
47.5°	515.9	506.4	496.9	490.2	486.6	482.8	479.1	475.4
50°	481.8	472.5	463.0	456.6	453.0	449.5	445.9	442.4
52.5°	447.8	438.3	428.7	422.2	418.4	414.7	411.1	407.3
55°	397.6	387.9	378.2	371.5	368.0	364.4	360.8	357.3
57.5°	348.6	338.7	328.8	322.6	319.9	317.2	314.5	311.8
60°	315.9	306.2	296.4	290.0	287.1	284.1	281.1	278.1
62.5°	283.7	274.7	265.7	260.0	257.6	255.2	252.8	250.4
65°	237.5	229.5	221.4	216.3	214.0	211.8	209.5	207.3
67.5°	195.1	188.2	181.3	176.6	174.1	171.6	169.1	166.7
70°	166.3	160.1	153.9	149.9	148.1	146.2	144.3	142.4
72.5°	140.5	135.1	129.8	126.4	124.7	122.9	121.2	119.5
75°	103.5	99.2	94.8	92.1	91.0	89.9	88.7	87.6
77.5°	73.2	70.7	68.1	66.7	66.4	66.1	65.8	65.4
80°	56.2	55.6	55.1	54.7	54.5	54.3	54.1	53.9
82.5°	43.6	43.3	42.9	42.5	42.4	42.1	42.0	41.8
85°	25.3	25.0	24.6	24.4	24.4	24.4	24.4	24.4
87.5°	14.2	14.3	14.4	14.7	14.9	15.1	15.4	15.6
90°	25.3	26.7	28.1	29.0	29.5	29.9	30.3	30.8
92.5°	24.6	25.9	27.3	28.0	28.1	28.2	28.3	28.4
95°	25.3	26.7	28.1	28.9	29.1	29.3	29.5	29.8
97.5°	27.4	27.6	27.6	27.9	28.1	28.3	28.5	28.8
100°	37.5	33.6	29.7	27.9	28.1	28.3	28.5	28.8
102.5°	134.1	92.2	50.3	29.4	29.5	29.5	29.5	29.6
105°	324.7	326.8	328.8	325.7	317.5	309.3	301.0	292.9
107.5°	401.7	402.7	403.7	404.6	405.5	406.4	407.3	408.1
110°	454.1	454.5	455.0	455.5	456.2	456.9	457.6	458.3



TEST NUMBER: P333069-927

CATALOG NUMBER: S124RDIW-S795D1340U927-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	504.7	504.6	504.5	504.9	505.8	506.7	507.6	508.4
115°	580.4	580.9	581.3	581.5	581.5	581.5	581.5	581.5
117.5°	656.6	656.5	656.4	656.3	656.2	656.2	656.1	655.9
120°	703.7	704.2	704.6	704.6	704.2	703.7	703.3	702.8
122.5°	750.2	750.5	750.8	750.7	750.2	749.7	749.3	748.8
125°	815.2	815.9	816.5	817.0	817.2	817.5	817.7	817.9
127.5°	879.7	879.6	879.4	879.2	879.1	878.8	878.7	878.5
130°	919.0	919.2	919.5	919.6	919.6	919.6	919.6	919.6
132.5°	957.7	957.9	958.1	958.1	958.0	957.8	957.6	957.4
135°	1011.0	1011.4	1011.9	1012.3	1012.8	1013.2	1013.7	1014.2
137.5°	1062.0	1062.5	1063.0	1063.2	1063.0	1063.0	1062.8	1062.6
140°	1093.6	1094.3	1095.0	1095.4	1095.7	1095.9	1096.1	1096.4
142.5°	1122.8	1123.3	1123.9	1124.1	1124.2	1124.2	1124.3	1124.3
145°	1164.6	1164.8	1165.1	1165.5	1165.9	1166.3	1166.8	1167.3
147.5°	1201.3	1201.5	1201.7	1201.9	1202.1	1202.4	1202.5	1202.8
150°	1224.8	1224.8	1224.8	1224.9	1225.1	1225.3	1225.6	1225.8
152.5°	1245.2	1245.6	1245.9	1246.1	1245.9	1245.8	1245.7	1245.5
155°	1272.9	1273.7	1274.7	1274.8	1274.1	1273.4	1272.7	1272.1
157.5°	1296.6	1297.8	1299.0	1299.0	1297.8	1296.6	1295.5	1294.3
160°	1311.8	1313.1	1314.5	1314.5	1313.1	1311.8	1310.4	1309.1
162.5°	1324.1	1325.5	1326.8	1326.7	1325.2	1323.7	1322.1	1320.6
165°	1341.5	1343.3	1345.1	1345.0	1343.0	1340.9	1338.9	1336.8
167.5°	1354.2	1356.1	1358.2	1358.0	1355.7	1353.4	1351.2	1348.9
170°	1362.0	1363.8	1365.6	1365.4	1363.2	1360.9	1358.6	1356.3
172.5°	1366.9	1368.8	1370.6	1370.3	1367.8	1365.3	1362.9	1360.4
175°	1372.8	1374.8	1376.9	1376.5	1373.8	1371.0	1368.3	1365.6
177.5°	1375.1	1376.5	1378.0	1377.6	1375.4	1373.2	1371.0	1368.8
180°	1373.8	1373.8	1373.8	1373.8	1373.8	1373.8	1373.8	1373.8

(END OF REPORT)