

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: P332948-927

Luminaire Tested: **S124RDIP-S795D1035U927-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332948-927  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-18,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S124RDIP-S795D1035U927-4F0-1E-UDD-F4  
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 795 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED  
HOUSING  
UPLIGHT 1035 LUMENS PER FOOT, BATWING OPTIC  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5472.4 lumens  
Efficiency: N/A  
Efficacy: 105.2 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

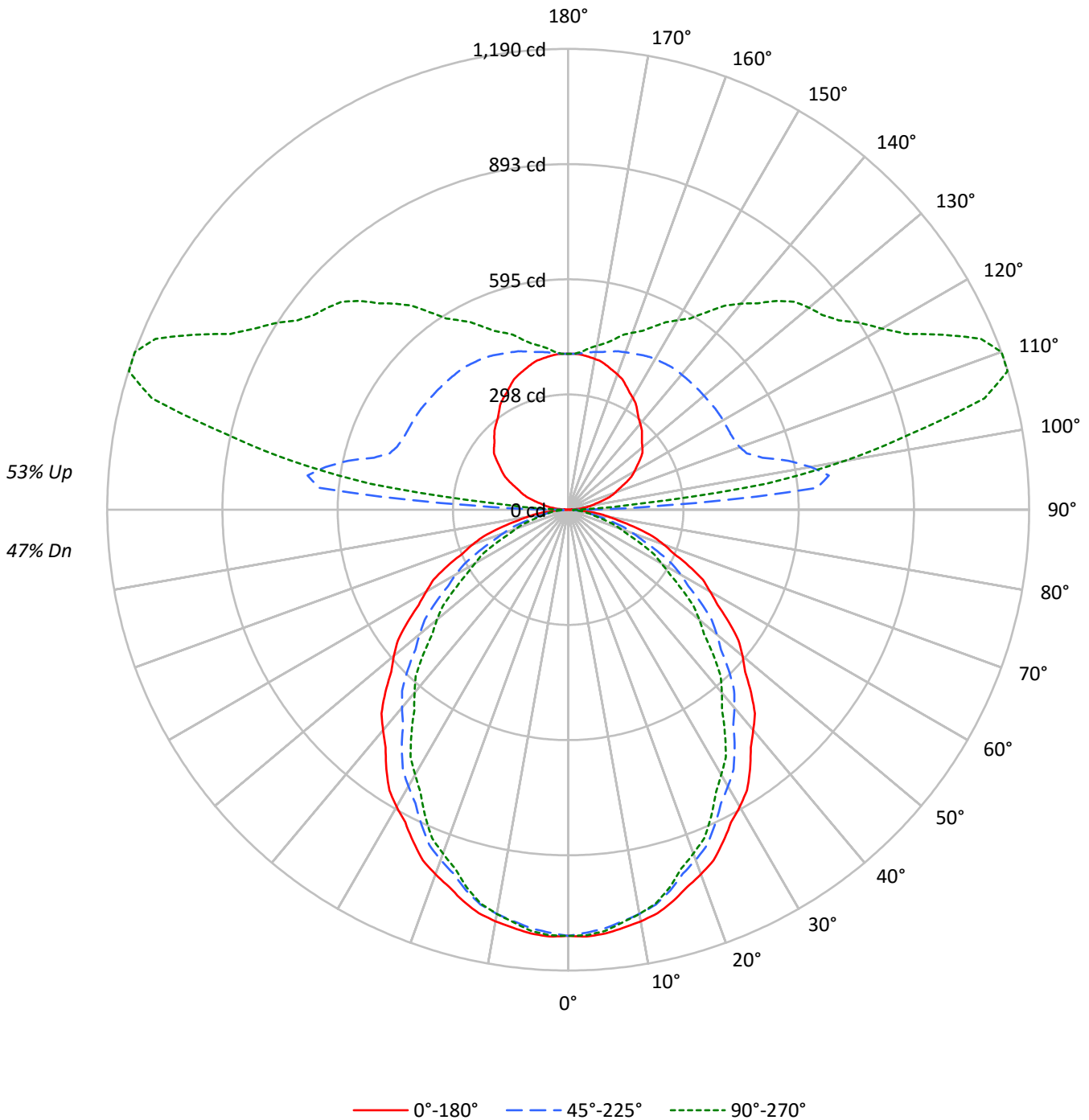
Input Watts (W): 52  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20									20									20									20										
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	50	30	10	0														
RCR																																						
0	106	106	106	106	98	98	98	98	81	81	81	67	67	67	53	53	53	47																				
1	97	93	89	86	89	86	82	79	72	69	67	59	57	56	47	46	45	40																				
2	89	82	76	71	81	75	70	66	63	59	56	52	49	47	42	40	38	34																				
3	81	72	65	59	74	66	60	55	56	51	47	46	43	40	37	35	33	29																				
4	74	64	56	50	68	59	52	47	50	45	41	41	38	34	33	31	29	25																				
5	68	57	49	43	62	53	46	40	45	39	35	37	33	30	30	27	25	22																				
6	63	51	43	37	58	47	40	35	40	35	31	34	30	26	27	24	22	19																				
7	58	46	38	33	53	43	36	31	37	31	27	31	26	23	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	24	31	25	22	26	22	19	21	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°	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	1.9
10°-20°	288.3	5.3
20°-30°	416.3	7.6
30°-40°	471.8	8.6
40°-50°	455.6	8.3
50°-60°	378.9	6.9
60°-70°	261.6	4.8
70°-80°	132.6	2.4
80°-90°	36.2	0.7
90°-100°	290.8	5.3
100°-110°	605.1	11.1
110°-120°	542.0	9.9
120°-130°	455.9	8.3
130°-140°	380.1	6.9
140°-150°	290.4	5.3
150°-160°	204.1	3.7
160°-170°	120.1	2.2
170°-180°	39.1	0.7
0°-30°	807.9	14.8
0°-40°	1279.7	23.4
0°-60°	2114.3	38.6
0°-90°	2544.7	46.5
90°-120°	1437.9	26.3
90°-150°	2564.4	46.9
90°-180°	2928.0	53.5
0°-180°	5472.4	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°	1	6	14	16	17	4
95°	26	82	644	319	193	29
105°	92	134	519	1117	1113	99
115°	163	204	463	889	1068	162
125°	227	270	460	756	852	202
135°	270	321	456	671	762	208
145°	311	356	454	566	622	195
155°	354	382	441	500	521	163
165°	385	397	423	448	455	109
175°	402	402	406	411	410	38
180°	402	402	402	402	402	



TEST NUMBER: P332948-927

CATALOG NUMBER: S124RDIP-S795D1035U927-4F0-1E-UDD-F4

**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°	15.7	14.8	14.0	13.0	12.0	11.3	12.1	12.0	12.1	12.3	12.0
90°	0.8	2.4	4.8	5.5	6.3	6.3	11.1	11.1	12.7	14.3	13.5
92.5°	9.0	13.2	20.6	30.2	41.7	58.2	98.4	159.8	219.5	250.9	209.0
95°	26.1	28.4	36.4	46.7	65.7	98.9	167.6	297.4	486.4	644.5	662.7
97.5°	46.8	46.8	53.6	63.1	79.4	107.3	160.3	267.3	455.2	678.8	832.6
100°	60.1	60.1	65.7	75.1	90.2	115.5	162.2	251.5	412.8	635.8	838.3
102.5°	72.7	74.0	78.9	87.8	102.2	126.2	168.4	247.1	384.4	582.1	790.8
105°	92.5	94.9	98.9	108.4	122.6	145.5	183.5	249.1	359.8	518.8	704.6
107.5°	114.4	116.0	119.9	130.0	143.6	166.2	201.1	260.8	355.4	483.4	635.0
110°	128.9	130.5	134.4	143.9	158.2	179.5	214.3	269.7	356.6	471.3	600.2



TEST NUMBER: P332948-927

CATALOG NUMBER: S124RDIP-S795D1035U927-4F0-1E-UDD-F4

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	142.8	144.4	149.0	157.9	172.1	193.5	227.0	279.2	360.4	465.6	580.7
115°	163.0	165.2	170.8	178.7	193.8	215.1	246.8	294.2	367.7	462.6	562.3
117.5°	183.8	186.0	190.9	199.6	213.7	235.8	265.9	309.5	375.5	461.8	554.1
120°	197.7	199.3	204.9	213.5	227.0	249.1	279.2	320.3	381.2	461.8	549.6
122.5°	210.4	211.9	217.5	225.5	240.3	261.7	291.8	330.4	386.9	461.2	544.5
125°	227.0	230.1	234.9	243.6	258.6	280.7	309.2	345.6	395.5	460.3	536.2
127.5°	241.7	244.2	249.9	259.8	275.5	297.9	325.3	358.7	402.2	458.5	525.0
130°	249.9	253.1	259.4	271.2	286.3	309.2	336.1	366.9	407.3	457.9	518.0
132.5°	258.1	260.6	268.9	280.1	296.4	318.1	345.0	375.2	411.7	457.2	511.7
135°	269.7	272.8	280.7	294.2	310.8	331.4	357.4	386.0	418.4	456.3	502.2
137.5°	281.2	284.2	292.9	305.7	323.0	342.6	366.9	393.6	422.3	456.1	493.9
140°	289.5	291.8	300.6	313.9	330.6	349.6	373.3	398.5	425.5	455.5	489.6
142.5°	298.3	300.7	308.7	321.5	337.5	355.8	379.0	402.3	428.0	455.5	485.8
145°	310.8	313.1	321.1	332.2	347.2	364.6	385.2	406.5	429.4	453.9	479.3
147.5°	324.9	325.7	332.6	344.0	356.5	372.2	391.5	410.1	430.2	451.1	473.4
150°	333.7	334.5	340.9	350.4	362.2	377.2	394.7	412.0	430.2	449.2	469.0
152.5°	342.0	342.1	348.5	357.3	367.9	381.7	397.2	413.3	429.0	446.0	463.9
155°	353.5	354.3	359.0	366.9	375.7	387.5	400.9	414.4	427.1	441.3	456.3
157.5°	364.7	364.7	369.2	375.3	382.9	392.3	403.6	414.4	425.0	436.4	448.5
160°	371.7	371.7	374.9	380.4	386.7	395.5	404.9	414.4	423.1	432.6	442.9
162.5°	378.0	377.4	379.9	384.8	390.5	397.4	406.2	414.4	421.2	428.8	437.8
165°	385.2	385.2	386.7	390.7	394.7	399.3	406.5	412.8	417.6	423.1	429.4
167.5°	392.3	391.5	392.3	395.3	397.5	401.1	406.3	410.9	413.8	417.4	421.8
170°	395.5	394.7	395.5	397.8	399.3	401.7	405.7	409.6	411.2	413.6	416.8
172.5°	398.5	397.8	397.9	399.7	400.6	402.3	405.0	408.4	408.7	409.8	412.3
175°	401.7	400.9	400.9	401.7	402.5	402.5	404.1	406.5	405.7	405.7	407.3
177.5°	403.1	402.5	401.9	402.5	402.5	402.5	403.1	404.4	403.1	403.1	403.8
180°	402.5	402.5	402.5	402.5	402.5	402.5	402.5	402.5	402.5	402.5	402.5



TEST NUMBER: P332948-927

CATALOG NUMBER: S124RDIP-S795D1035U927-4F0-1E-UDD-F4

**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°	12.0	12.0	12.0	12.0	12.3	12.6	12.6	12.8
90°	14.3	15.1	15.8	15.8	16.6	17.4	16.6	16.6
92.5°	155.3	116.9	93.0	77.2	67.9	63.6	60.9	60.9
95°	586.0	463.4	357.4	280.7	242.0	217.5	203.3	193.0
97.5°	865.9	820.2	742.9	660.4	603.6	556.0	532.3	515.8
100°	953.8	969.6	930.8	872.3	803.5	755.3	731.5	725.2
102.5°	949.4	1027.8	1039.0	1014.6	972.4	937.5	912.5	907.4
105°	885.7	1022.5	1100.8	1133.3	1134.9	1128.5	1117.5	1112.7
107.5°	795.4	941.1	1051.4	1121.9	1160.9	1179.0	1186.9	1189.0
110°	741.0	877.8	992.5	1079.5	1135.7	1168.9	1183.1	1190.3





TEST NUMBER: P332948-927

CATALOG NUMBER: S124RDIP-S795D1035U927-4F0-1E-UDD-F4

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	701.2	822.1	930.5	1017.5	1081.2	1121.4	1141.4	1152.9
115°	661.2	758.4	851.0	926.9	989.4	1036.8	1062.1	1068.4
117.5°	641.5	722.1	794.8	859.2	912.5	952.4	977.9	982.9
120°	632.6	706.2	769.5	825.6	870.7	905.5	926.1	934.8
122.5°	625.1	696.1	753.7	802.9	841.0	870.7	888.1	896.8
125°	612.1	680.1	734.7	778.2	809.8	832.7	847.8	852.5
127.5°	596.3	661.3	715.7	757.0	788.8	809.2	821.8	826.6
130°	583.7	646.1	699.9	741.8	774.2	794.0	806.7	811.4
132.5°	570.4	629.1	681.5	723.5	755.3	777.5	789.6	794.3
135°	552.0	603.4	651.6	691.2	722.9	745.0	757.6	762.4
137.5°	535.4	578.9	619.6	655.3	684.8	706.7	717.2	722.9
140°	525.9	563.1	598.7	631.8	659.6	677.0	688.0	694.3
142.5°	517.1	549.8	580.4	609.1	633.6	649.7	659.6	664.0
145°	504.5	531.5	555.2	577.3	597.1	610.5	618.5	622.4
147.5°	494.2	515.6	534.6	552.0	566.6	578.1	584.2	585.5
150°	488.0	506.1	522.0	536.2	548.8	559.1	563.9	564.7
152.5°	481.0	496.6	511.2	522.9	533.7	542.0	544.9	545.7
155°	470.6	483.2	495.0	504.5	512.5	518.8	521.2	521.2
157.5°	459.3	469.9	479.9	487.5	493.5	498.2	499.6	499.6
160°	452.3	461.1	469.8	476.1	480.9	485.6	486.4	486.4
162.5°	445.4	452.8	459.6	465.3	468.8	473.6	474.4	473.7
165°	435.8	440.5	446.0	450.0	453.1	456.3	455.5	454.7
167.5°	426.4	430.1	434.5	436.9	438.5	440.5	440.4	439.7
170°	420.7	423.1	426.3	428.6	430.2	431.0	430.2	430.2
172.5°	415.7	417.4	419.3	421.0	422.0	422.8	422.0	420.7
175°	408.8	409.6	411.2	411.2	411.2	412.8	411.2	409.6
177.5°	404.4	405.0	405.0	405.7	405.0	405.7	404.4	403.1
180°	402.5	402.5	402.5	402.5	402.5	402.5	402.5	402.5

(END OF REPORT)