

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: P332595-930

Luminaire Tested: **S124DIP-S795D590U930-4F0-1E-UDD-F**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332595-930  
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: S124DIP-S795D590U930-4F0-1E-UDD-F  
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 795 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
UPLIGHT 590 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4702.5 lumens  
Efficiency: N/A  
Efficacy: 116.7 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.3  
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')  
CIE Type: General Diffuse

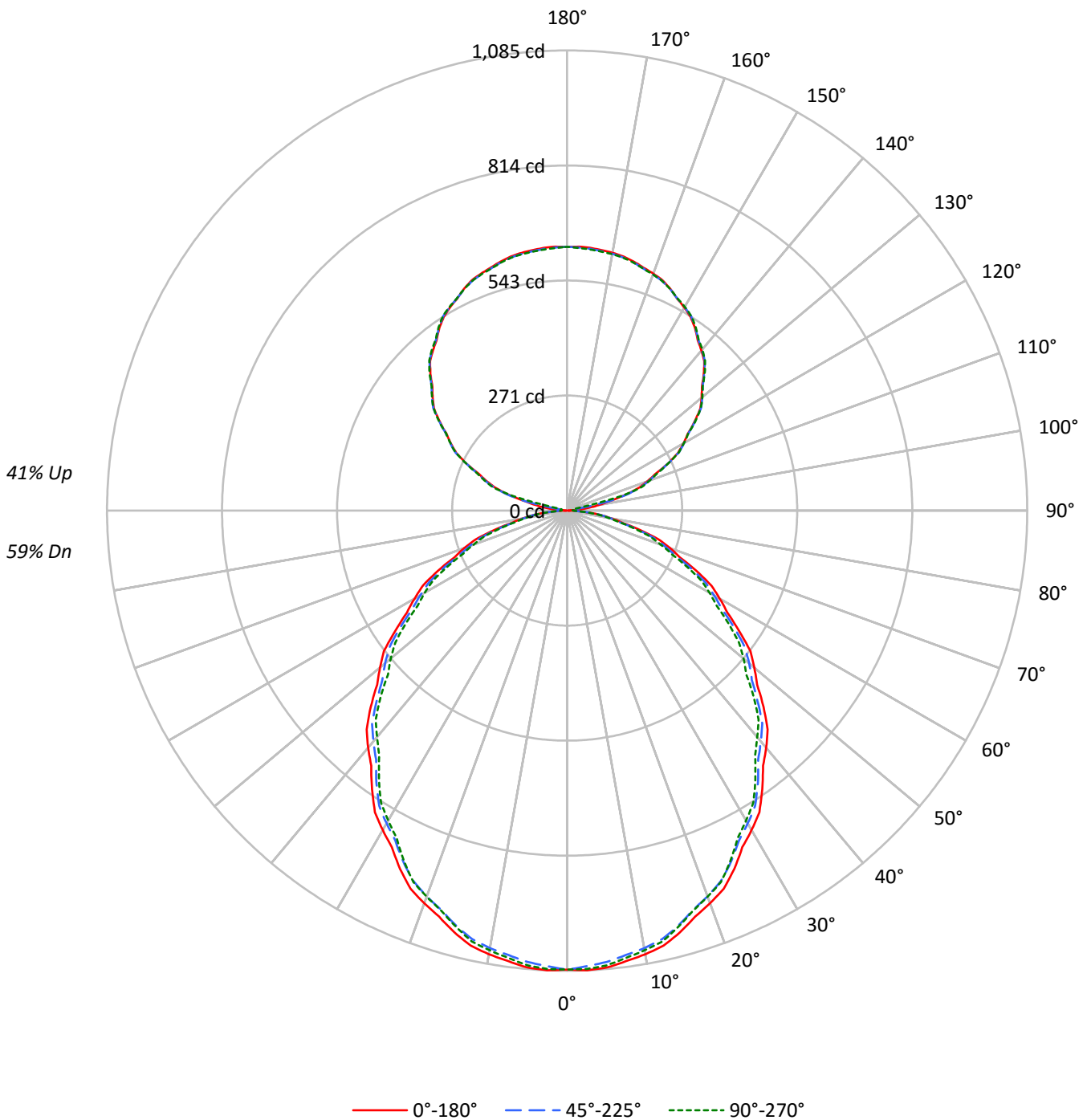
Input Watts (W): 40.3  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P332595-930

CATALOG NUMBER: S124DIP-S795D590U930-4F0-1E-UDD-F

### Luminous Intensity Polar Plot





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CATALOG NUMBER: S124DIP-S795D590U930-4F0-1E-UDD-F

**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	109	109	109	109	102	102	102	102	88	88	88	76	76	76	64	64	64	59
1	100	95	91	88	93	89	86	83	77	75	73	67	65	63	57	56	54	50
2	91	83	77	72	85	78	72	68	68	64	60	59	56	53	50	48	46	42
3	83	73	66	60	77	69	62	57	60	55	51	52	48	45	44	41	39	35
4	76	65	57	51	70	61	54	48	53	48	43	46	42	38	40	36	34	30
5	70	58	50	43	65	54	47	41	48	42	37	42	37	33	36	32	29	26
6	64	52	44	38	60	49	41	36	43	37	33	38	33	29	32	29	26	23
7	59	47	39	33	55	44	37	32	39	33	29	34	29	26	30	26	23	20
8	55	43	35	29	51	40	33	28	36	30	26	31	27	23	27	23	21	18
9	51	39	31	26	48	37	30	25	33	27	23	29	24	21	25	21	19	17
10	48	36	29	24	45	34	27	23	30	25	21	27	22	19	23	20	17	15

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

	0°	45°	90°
0°	8737	8737	8737
5°	8763	8658	8721
10°	8708	8588	8630
15°	8603	8466	8487
20°	8463	8314	8322
25°	8304	8141	8118
30°	8108	7938	7866
35°	7906	7727	7624
40°	7695	7484	7347
45°	7476	7247	7108
50°	7232	7036	6818
55°	6970	6763	6542
60°	6707	6455	6260
65°	6411	6162	5914
70°	6080	5773	5549
75°	5571	5303	5168
80°	4956	4756	4635
85°	4335	4177	4094



TEST NUMBER: P332595-930

CATALOG NUMBER: S124DIP-S795D590U930-4F0-1E-UDD-F

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	101.9	2.2
10°-20°	287.2	6.1
20°-30°	422.7	9.0
30°-40°	491.4	10.4
40°-50°	491.4	10.4
50°-60°	429.8	9.1
60°-70°	319.2	6.8
70°-80°	181.4	3.9
80°-90°	54.1	1.2
90°-100°	21.3	0.5
100°-110°	135.6	2.9
110°-120°	259.4	5.5
120°-130°	329.3	7.0
130°-140°	352.3	7.5
140°-150°	329.4	7.0
150°-160°	265.7	5.6
160°-170°	171.4	3.6
170°-180°	59.1	1.3
0°-30°	811.8	17.3
0°-40°	1303.1	27.7
0°-60°	2224.4	47.3
0°-90°	2779.1	59.1
90°-120°	416.3	8.9
90°-150°	1427.3	30.4
90°-180°	1923.0	40.9
0°-180°	4702.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1082	1082	1082	1082	1082	
5°	1081	1078	1068	1077	1076	103
15°	1029	1025	1013	1018	1016	290
25°	932	926	914	915	911	429
35°	802	796	784	778	774	501
45°	655	648	635	626	623	505
55°	495	492	480	470	465	443
65°	336	331	323	314	310	332
75°	179	174	170	167	166	190
85°	47	47	45	45	44	52
90°	1	6	10	13	14	4
95°	26	11	10	13	14	33
105°	140	143	145	148	133	146
115°	261	263	262	263	263	257
125°	367	369	368	370	370	328
135°	456	455	457	458	459	351
145°	526	527	527	527	528	328
155°	576	577	575	577	576	266
165°	608	606	606	609	605	172
175°	622	619	620	623	618	59
180°	622	622	622	622	622	



TEST NUMBER: P332595-930

CATALOG NUMBER: S124DIP-S795D590U930-4F0-1E-UDD-F

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1082.3	1082.3	1082.3	1082.3	1082.3	1082.3	1082.3	1082.3	1082.3	1082.3	1082.3
2.5°	1085.1	1084.6	1084.1	1083.7	1083.2	1082.1	1080.4	1078.7	1077.0	1075.4	1076.8
5°	1081.4	1080.7	1079.9	1079.1	1078.3	1076.8	1074.7	1072.6	1070.5	1068.4	1070.5
7.5°	1071.4	1070.6	1069.8	1069.0	1068.3	1066.7	1064.4	1062.0	1059.6	1057.3	1059.0
10°	1062.3	1061.6	1060.8	1060.1	1059.2	1057.6	1055.1	1052.6	1050.1	1047.6	1049.1
12.5°	1050.5	1049.8	1049.0	1048.2	1047.5	1045.7	1043.1	1040.4	1037.8	1035.1	1036.8
15°	1029.4	1028.6	1027.8	1027.0	1026.3	1024.5	1021.6	1018.7	1015.8	1012.9	1014.1
17.5°	1003.9	1002.9	1001.9	1001.0	1000.0	998.2	995.5	992.7	989.9	987.2	988.0
20°	985.1	984.1	983.3	982.3	981.3	979.3	976.5	973.5	970.7	967.8	968.4
22.5°	965.1	963.8	962.5	961.2	959.9	957.9	955.0	952.1	949.2	946.3	947.4
25°	932.2	930.9	929.5	928.2	926.8	924.8	922.1	919.4	916.7	914.0	914.2
27.5°	894.8	893.4	892.0	890.6	889.2	887.3	884.8	882.3	879.8	877.3	876.8
30°	869.8	868.3	866.7	865.2	863.6	861.6	859.1	856.6	854.1	851.6	850.8
32.5°	843.4	842.0	840.7	839.3	837.9	835.8	833.2	830.5	827.9	825.2	824.3
35°	802.2	800.8	799.5	798.1	796.8	794.8	792.1	789.4	786.7	784.0	782.6
37.5°	758.6	757.4	756.2	755.0	753.7	751.6	748.8	745.8	743.0	740.0	738.6
40°	730.2	728.6	727.1	725.5	724.0	721.8	718.9	716.0	713.1	710.2	708.3
42.5°	699.7	698.7	697.8	696.9	695.9	693.9	690.7	687.5	684.3	681.1	678.9
45°	654.8	653.4	652.1	650.7	649.4	647.1	644.1	641.0	637.9	634.8	632.7
47.5°	607.7	606.8	605.9	605.0	604.1	602.2	599.3	596.5	593.6	590.8	588.3
50°	575.8	575.0	574.3	573.5	572.7	571.0	568.3	565.7	562.9	560.2	557.5
52.5°	544.6	543.7	542.7	541.8	540.9	539.0	536.1	533.3	530.4	527.6	525.2
55°	495.2	494.6	494.0	493.4	492.8	491.2	488.5	485.8	483.1	480.5	478.1
57.5°	448.0	447.4	446.7	446.1	445.4	443.7	441.1	438.4	435.8	433.1	430.9
60°	415.4	414.4	413.4	412.5	411.6	409.8	407.3	404.8	402.3	399.8	398.0
62.5°	383.5	382.7	381.9	381.1	380.3	378.5	375.9	373.2	370.6	367.9	366.3
65°	335.6	334.7	333.7	332.7	331.7	330.3	328.4	326.4	324.5	322.6	320.7
67.5°	287.4	286.5	285.6	284.7	283.9	282.5	280.6	278.8	277.0	275.1	273.2
70°	257.6	256.2	254.9	253.5	252.2	250.7	249.2	247.6	246.1	244.6	243.0
72.5°	225.7	224.3	223.0	221.6	220.2	219.0	217.8	216.5	215.2	214.0	212.8
75°	178.6	177.7	176.8	175.8	174.8	173.8	172.8	171.9	171.0	170.0	169.2
77.5°	133.7	133.3	132.9	132.5	132.0	131.4	130.5	129.7	128.8	128.0	127.8
80°	106.6	106.1	105.5	104.9	104.4	103.9	103.5	103.1	102.7	102.3	101.9
82.5°	80.3	80.1	79.7	79.5	79.2	79.1	79.0	78.9	78.8	78.8	78.5
85°	46.8	46.8	46.8	46.8	46.8	46.6	46.2	45.9	45.5	45.1	45.1
87.5°	18.3	18.4	18.4	18.5	18.6	18.7	18.7	18.7	18.7	18.7	18.8
90°	1.4	2.5	3.7	4.8	6.0	6.9	7.7	8.6	9.4	10.2	10.8
92.5°	5.9	6.0	6.0	6.0	6.1	6.5	7.4	8.2	9.0	9.9	10.5
95°	25.6	22.1	18.6	15.0	11.5	9.8	9.9	10.0	10.1	10.2	10.8
97.5°	54.3	56.5	58.7	60.9	63.1	58.4	46.9	35.4	23.8	12.3	12.3
100°	76.2	78.1	80.0	81.9	83.7	77.5	63.3	49.0	34.7	20.5	18.7
102.5°	100.9	102.2	103.5	104.9	106.3	106.1	104.2	102.3	100.4	98.6	79.7
105°	140.0	140.6	141.2	141.9	142.4	143.0	143.6	144.1	144.6	145.1	146.0
107.5°	176.3	176.7	177.0	177.2	177.6	178.1	178.8	179.5	180.2	180.9	181.4
110°	200.9	201.2	201.5	201.9	202.1	202.6	203.3	203.8	204.5	205.1	205.3



TEST NUMBER: P332595-930

CATALOG NUMBER: S124DIP-S795D590U930-4F0-1E-UDD-F

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	224.7	225.3	225.8	226.4	227.0	227.4	227.6	228.0	228.3	228.5	228.5
115°	261.4	261.7	262.0	262.3	262.6	262.7	262.6	262.5	262.4	262.3	262.5
117.5°	294.4	294.8	295.2	295.6	296.0	296.4	296.6	296.9	297.0	297.3	297.3
120°	316.7	317.2	317.6	318.0	318.4	318.5	318.5	318.3	318.2	318.1	318.3
122.5°	337.5	337.8	338.0	338.3	338.5	338.8	338.9	339.0	339.2	339.3	339.4
125°	367.4	367.8	368.3	368.7	369.1	369.2	368.9	368.8	368.5	368.4	368.7
127.5°	395.7	395.7	395.9	396.0	396.1	396.4	396.9	397.3	397.8	398.3	398.2
130°	413.9	414.0	414.1	414.3	414.3	414.5	414.8	415.2	415.5	415.8	415.9
132.5°	430.6	430.8	431.0	431.2	431.4	431.7	432.1	432.4	432.8	433.3	433.3
135°	455.8	455.7	455.6	455.4	455.3	455.5	455.9	456.3	456.7	457.1	457.4
137.5°	478.0	478.0	478.1	478.1	478.2	478.4	478.8	479.3	479.8	480.2	480.5
140°	492.5	492.7	492.9	493.1	493.3	493.5	493.7	494.0	494.2	494.4	494.6
142.5°	505.6	505.9	506.3	506.6	507.0	507.3	507.4	507.5	507.6	507.8	508.0
145°	525.5	525.9	526.1	526.4	526.8	526.9	526.9	526.9	526.9	526.9	527.0
147.5°	541.4	542.0	542.6	543.2	543.7	544.0	543.9	543.8	543.6	543.6	543.6
150°	552.9	553.3	553.8	554.2	554.6	554.8	554.6	554.6	554.5	554.3	554.3
152.5°	562.6	563.0	563.3	563.6	563.9	564.0	563.9	563.7	563.5	563.3	563.5
155°	576.3	576.3	576.4	576.5	576.7	576.5	576.3	575.9	575.6	575.3	575.7
157.5°	587.7	587.6	587.5	587.5	587.4	587.2	586.9	586.5	586.1	585.8	586.4
160°	594.4	594.0	593.7	593.5	593.1	592.9	592.8	592.7	592.6	592.5	593.1
162.5°	600.3	599.9	599.5	599.2	598.8	598.5	598.3	598.3	598.2	598.1	598.7
165°	607.8	607.3	606.8	606.3	605.8	605.5	605.5	605.5	605.5	605.5	606.3
167.5°	613.8	613.3	612.7	612.2	611.6	611.3	611.3	611.2	611.1	611.1	612.0
170°	617.2	616.5	615.9	615.3	614.7	614.4	614.5	614.6	614.7	614.8	615.6
172.5°	619.4	618.7	618.2	617.5	616.9	616.6	616.8	616.9	616.9	617.0	617.9
175°	621.8	621.2	620.5	620.0	619.3	619.1	619.1	619.3	619.4	619.5	620.4
177.5°	622.9	622.3	621.7	621.2	620.6	620.4	620.5	620.7	620.9	621.0	621.7
180°	621.8	621.8	621.8	621.8	621.8	621.8	621.8	621.8	621.8	621.8	621.8



TEST NUMBER: P332595-930

CATALOG NUMBER: S124DIP-S795D590U930-4F0-1E-UDD-F

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1082.3	1082.3	1082.3	1082.3	1082.3	1082.3	1082.3	1082.3
2.5°	1078.4	1079.9	1081.5	1082.2	1082.1	1081.9	1081.7	1081.6
5°	1072.6	1074.7	1076.8	1077.7	1077.3	1077.0	1076.6	1076.2
7.5°	1060.7	1062.4	1064.0	1064.8	1064.6	1064.4	1064.1	1063.9
10°	1050.7	1052.2	1053.8	1054.3	1053.9	1053.5	1053.2	1052.8
12.5°	1038.5	1040.2	1041.9	1042.4	1042.0	1041.4	1040.8	1040.3
15°	1015.2	1016.4	1017.5	1017.8	1017.2	1016.7	1016.1	1015.5
17.5°	988.7	989.4	990.2	990.3	989.9	989.5	989.2	988.8
20°	969.0	969.6	970.1	970.2	969.8	969.5	969.1	968.7
22.5°	948.4	949.4	950.5	950.6	949.9	949.3	948.5	947.9
25°	914.4	914.6	914.8	914.5	913.8	913.0	912.2	911.4
27.5°	876.4	875.9	875.4	874.7	873.8	872.8	871.8	870.8
30°	850.0	849.3	848.5	847.7	846.7	845.7	844.7	843.8
32.5°	823.4	822.5	821.6	820.6	819.6	818.6	817.7	816.8
35°	781.3	779.9	778.5	777.4	776.4	775.5	774.5	773.6
37.5°	737.1	735.6	734.3	732.9	731.6	730.3	729.0	727.7
40°	706.4	704.5	702.5	701.1	700.1	699.2	698.2	697.2
42.5°	676.6	674.4	672.1	670.7	670.1	669.4	668.8	668.1
45°	630.6	628.4	626.3	625.0	624.4	623.8	623.2	622.6
47.5°	586.0	583.6	581.1	579.3	577.8	576.3	574.9	573.4
50°	554.8	552.1	549.4	547.5	546.3	545.2	544.0	542.9
52.5°	522.9	520.4	518.0	516.2	514.7	513.2	511.8	510.3
55°	475.8	473.5	471.2	469.4	468.3	467.2	465.9	464.8
57.5°	428.7	426.5	424.3	422.7	421.5	420.4	419.3	418.2
60°	396.3	394.6	392.8	391.5	390.5	389.6	388.6	387.7
62.5°	364.7	363.1	361.6	360.3	359.3	358.3	357.4	356.4
65°	318.8	316.8	314.9	313.5	312.5	311.5	310.5	309.6
67.5°	271.4	269.5	267.7	266.6	266.4	266.1	265.8	265.5
70°	241.5	239.9	238.4	237.3	236.8	236.2	235.6	235.1
72.5°	211.6	210.3	209.1	208.2	207.6	207.0	206.4	205.9
75°	168.4	167.6	166.9	166.4	166.2	166.0	165.8	165.7
77.5°	127.5	127.3	127.1	126.7	126.2	125.7	125.2	124.7
80°	101.6	101.2	100.8	100.5	100.3	100.1	100.0	99.7
82.5°	78.3	78.0	77.8	77.6	77.5	77.2	77.0	76.8
85°	45.1	45.1	45.1	45.0	44.8	44.6	44.4	44.2
87.5°	18.9	19.1	19.2	19.2	19.3	19.3	19.4	19.4
90°	11.5	12.1	12.7	13.1	13.4	13.5	13.8	13.9
92.5°	11.1	11.7	12.3	12.6	12.7	12.7	12.8	12.8
95°	11.5	12.1	12.7	13.0	13.2	13.3	13.4	13.5
97.5°	12.4	12.5	12.6	12.6	12.7	12.8	12.9	13.0
100°	17.0	15.2	13.5	12.6	12.7	12.8	12.9	13.0
102.5°	60.7	41.7	22.7	13.3	13.4	13.4	13.4	13.4
105°	147.0	147.9	148.8	147.4	143.7	140.0	136.2	132.6
107.5°	181.8	182.3	182.7	183.1	183.5	183.9	184.3	184.7
110°	205.5	205.7	205.9	206.2	206.5	206.8	207.1	207.4





TEST NUMBER: P332595-930

CATALOG NUMBER: S124DIP-S795D590U930-4F0-1E-UDD-F

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	228.4	228.4	228.4	228.5	228.9	229.3	229.8	230.1
115°	262.7	262.9	263.1	263.3	263.3	263.3	263.3	263.3
117.5°	297.2	297.2	297.1	297.1	297.0	297.0	296.9	296.9
120°	318.5	318.7	318.9	318.9	318.7	318.5	318.3	318.1
122.5°	339.6	339.7	339.8	339.7	339.6	339.3	339.2	338.9
125°	368.9	369.2	369.6	369.8	369.9	370.0	370.1	370.2
127.5°	398.2	398.1	398.0	397.9	397.9	397.8	397.7	397.6
130°	416.0	416.0	416.2	416.2	416.2	416.2	416.2	416.2
132.5°	433.5	433.6	433.7	433.7	433.6	433.5	433.4	433.3
135°	457.5	457.8	458.0	458.2	458.4	458.6	458.9	459.0
137.5°	480.7	480.9	481.1	481.2	481.2	481.1	481.0	480.9
140°	495.0	495.3	495.6	495.8	495.9	496.0	496.1	496.2
142.5°	508.2	508.4	508.7	508.8	508.8	508.8	508.8	508.9
145°	527.1	527.3	527.3	527.5	527.7	527.9	528.2	528.3
147.5°	543.7	543.8	543.9	544.0	544.1	544.2	544.3	544.4
150°	554.3	554.3	554.3	554.4	554.5	554.6	554.7	554.8
152.5°	563.6	563.8	563.9	564.0	563.9	563.9	563.8	563.8
155°	576.1	576.5	576.9	577.0	576.7	576.3	576.1	575.8
157.5°	586.9	587.4	587.9	587.9	587.4	586.9	586.4	585.8
160°	593.7	594.4	595.0	595.0	594.4	593.7	593.1	592.5
162.5°	599.3	599.9	600.5	600.5	599.8	599.1	598.4	597.7
165°	607.2	608.0	608.9	608.8	607.8	606.9	606.0	605.0
167.5°	612.9	613.8	614.7	614.7	613.7	612.6	611.6	610.6
170°	616.4	617.3	618.2	618.0	617.0	616.0	614.9	613.9
172.5°	618.7	619.5	620.4	620.2	619.1	618.0	616.9	615.7
175°	621.3	622.2	623.2	623.1	621.8	620.5	619.3	618.1
177.5°	622.4	623.1	623.7	623.5	622.6	621.6	620.5	619.5
180°	621.8	621.8	621.8	621.8	621.8	621.8	621.8	621.8

(END OF REPORT)