

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: P332611-840

Luminaire Tested: **S124DIP-S795D1035U840-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332611-840  
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: S124DIP-S795D1035U840-4F0-1E-UDD-D1  
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 795 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 1035 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6889.8 lumens  
Efficiency: N/A  
Efficacy: 132.5 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39  
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.08')  
CIE Type: General Diffuse

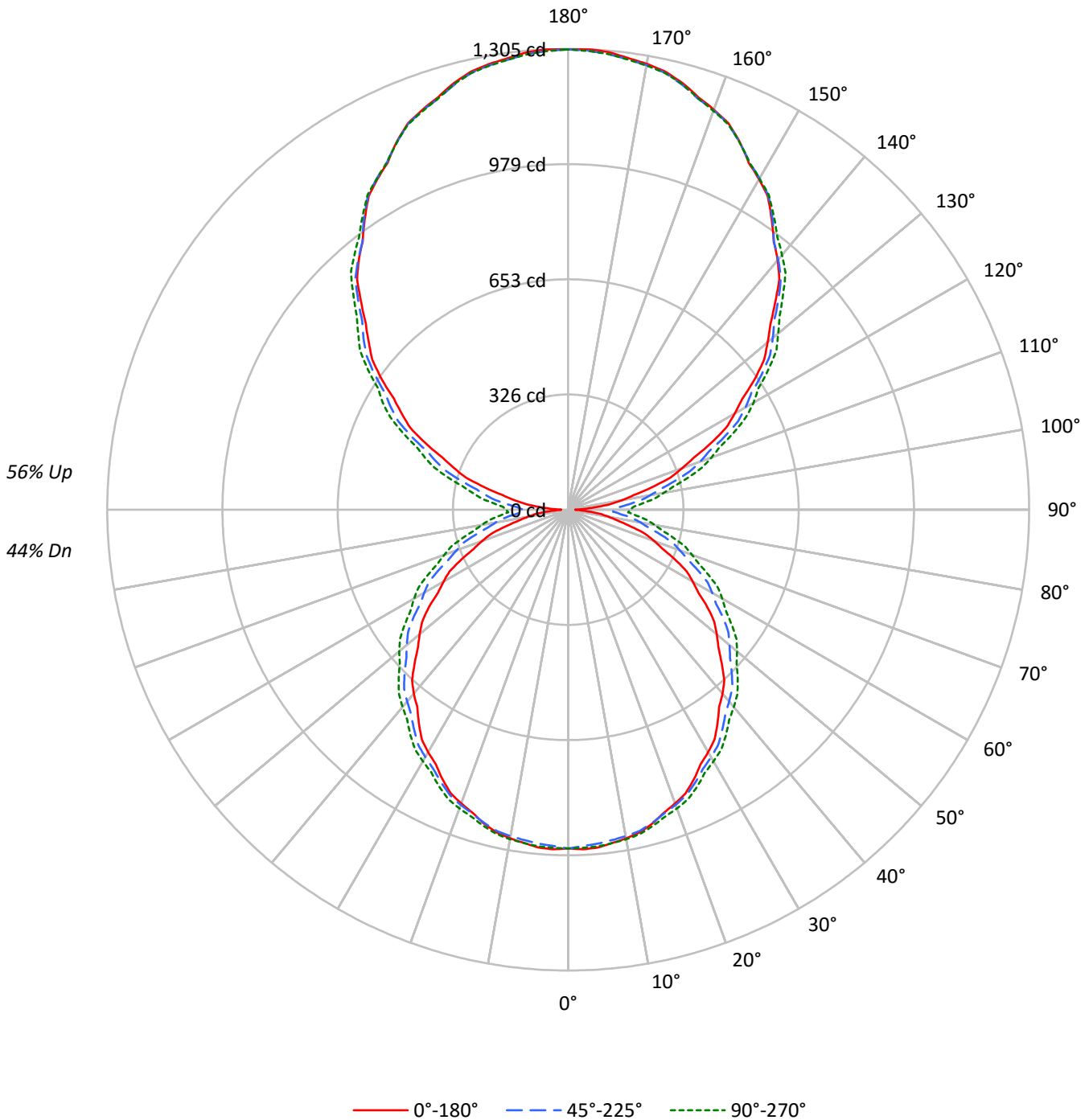
Input Watts (W): 52  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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

RF	20				20				20				20				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	97	97	97	97	80	80	80		65	65	65		51	51	51	44
1	96	91	87	83	87	83	80	76	69	66	64		55	54	52		43	42	41	35
2	87	79	72	67	79	72	67	62	60	56	52		48	45	43		38	35	34	29
3	79	69	61	55	72	63	57	51	52	47	43		42	39	36		33	30	28	24
4	72	61	53	46	65	56	49	43	46	41	37		37	33	30		29	26	24	20
5	66	54	46	39	60	50	42	37	41	36	31		33	29	26		26	23	21	17
6	61	48	40	34	55	44	37	32	37	31	27		30	26	23		24	21	18	15
7	56	43	35	30	51	40	33	28	33	28	24		27	23	20		22	18	16	13
8	52	39	31	26	47	36	29	24	30	25	21		25	21	18		20	17	14	12
9	48	36	28	23	44	33	26	22	28	22	19		23	19	16		18	15	13	11
10	45	33	25	21	41	30	24	19	26	20	17		21	17	14		17	14	12	10

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

	0°	45°	90°
0°	7744	7744	7744
5°	7768	7569	7589
10°	7720	7444	7439
15°	7651	7301	7261
20°	7547	7143	7089
25°	7429	6965	6898
30°	7302	6789	6703
35°	7158	6609	6532
40°	7042	6436	6353
45°	6871	6278	6200
50°	6727	6095	6039
55°	6577	5924	5849
60°	6344	5704	5676
65°	6089	5468	5463
70°	5778	5200	5215
75°	5348	4904	4991
80°	4865	4620	4771
85°	4264	4369	4644



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	90.8	1.3
10°-20°	260.3	3.8
20°-30°	393.5	5.7
30°-40°	476.1	6.9
40°-50°	503.4	7.3
50°-60°	473.7	6.9
60°-70°	393.1	5.7
70°-80°	276.1	4.0
80°-90°	160.0	2.3
90°-100°	178.6	2.6
100°-110°	323.3	4.7
110°-120°	478.3	6.9
120°-130°	595.9	8.6
130°-140°	651.3	9.5
140°-150°	631.2	9.2
150°-160°	529.0	7.7
160°-170°	352.0	5.1
170°-180°	123.2	1.8
0°-30°	744.6	10.8
0°-40°	1220.8	17.7
0°-60°	2197.9	31.9
0°-90°	3027.0	43.9
90°-120°	980.2	14.2
90°-150°	2858.6	41.5
90°-180°	3863.0	56.1
0°-180°	6889.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	959	959	959	959	959	
5°	960	957	950	958	957	91
15°	921	921	918	928	927	259
25°	842	848	852	863	865	388
35°	737	750	760	775	779	461
45°	614	635	655	673	679	475
55°	481	504	536	557	564	429
65°	333	368	404	430	439	330
75°	185	225	270	299	309	196
85°	57	102	150	181	193	61
90°	20	74	129	164	176	15
95°	74	119	170	201	212	78
105°	244	268	311	340	352	260
115°	446	457	488	510	517	440
125°	644	645	669	687	692	574
135°	828	834	841	856	860	640
145°	1004	1007	1008	1013	1015	628
155°	1149	1149	1148	1152	1148	529
165°	1251	1248	1246	1251	1248	352
175°	1301	1297	1295	1302	1295	123
180°	1303	1303	1303	1303	1303	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	959.3	959.3	959.3	959.3	959.3	959.3	959.3	959.3	959.3	959.3	959.3
2.5°	962.7	962.1	961.5	961.0	960.4	959.4	957.8	956.2	954.7	953.2	954.5
5°	960.3	959.6	958.9	958.2	957.5	956.2	954.5	952.9	951.2	949.6	951.5
7.5°	952.1	951.7	951.3	950.9	950.4	949.5	948.2	946.7	945.3	944.0	946.1
10°	945.2	945.0	944.8	944.5	944.3	943.6	942.4	941.2	940.0	938.8	941.0
12.5°	935.8	935.7	935.7	935.6	935.6	935.2	934.4	933.5	932.7	931.9	933.9
15°	920.6	920.8	921.0	921.3	921.5	921.3	920.6	919.9	919.1	918.4	920.6
17.5°	899.7	900.4	901.1	901.9	902.6	902.8	902.7	902.6	902.4	902.3	904.5
20°	885.1	885.9	886.6	887.3	888.0	888.5	888.7	888.9	889.2	889.4	891.8
22.5°	868.8	869.7	870.6	871.5	872.4	873.1	873.5	873.9	874.3	874.8	877.2
25°	842.1	843.5	845.1	846.5	847.9	849.0	849.7	850.4	851.1	851.8	854.4
27.5°	812.5	814.6	816.7	818.8	820.9	822.5	823.6	824.7	825.8	826.9	829.3
30°	792.7	794.7	796.6	798.5	800.4	802.1	803.9	805.5	807.2	808.8	811.4
32.5°	771.2	773.6	775.9	778.1	780.4	782.4	784.4	786.2	788.1	789.9	792.9
35°	736.9	739.7	742.7	745.5	748.3	750.9	753.4	755.8	758.1	760.5	763.9
37.5°	702.3	705.6	708.9	712.2	715.5	718.6	721.5	724.5	727.5	730.4	733.9
40°	679.9	683.1	686.1	689.2	692.4	695.6	698.9	702.3	705.6	708.9	712.6
42.5°	654.2	657.6	661.2	664.6	668.1	671.8	675.7	679.6	683.6	687.4	691.5
45°	614.4	618.9	623.5	628.0	632.6	637.1	641.7	646.2	650.7	655.2	659.3
47.5°	576.4	581.1	585.7	590.5	595.1	600.1	605.3	610.6	615.8	621.1	625.3
50°	548.9	554.1	559.4	564.6	569.9	575.1	580.4	585.6	590.9	596.1	601.0
52.5°	521.4	526.6	531.9	537.1	542.4	548.1	554.0	560.1	566.1	572.1	576.8
55°	481.2	486.3	491.3	496.2	501.3	507.4	514.5	521.7	528.9	536.0	540.8
57.5°	436.4	442.5	448.8	454.9	461.1	467.8	474.9	482.0	489.2	496.2	501.9
60°	407.1	413.3	419.5	425.8	431.9	439.0	446.9	454.7	462.6	470.5	475.9
62.5°	378.7	385.6	392.3	399.1	405.9	413.2	421.1	429.0	436.9	444.7	450.2
65°	333.0	340.6	348.3	355.9	363.6	371.4	379.5	387.7	395.8	403.8	409.8
67.5°	288.9	297.1	305.2	313.3	321.4	329.8	338.5	347.2	355.9	364.6	370.6
70°	258.8	267.0	275.1	283.3	291.3	299.9	309.0	318.1	327.1	336.2	342.6
72.5°	229.6	237.9	246.3	254.6	262.9	271.9	281.6	291.1	300.8	310.4	316.7
75°	184.8	193.6	202.4	211.3	220.0	229.5	239.5	249.5	259.6	269.6	276.3
77.5°	142.9	152.2	161.6	171.0	180.3	190.3	200.8	211.3	221.8	232.3	239.0
80°	117.0	126.6	136.1	145.7	155.3	165.3	175.8	186.3	196.8	207.3	214.5
82.5°	91.3	101.2	111.2	121.1	131.0	141.3	151.8	162.3	172.8	183.3	190.6
85°	57.0	67.0	77.0	87.1	97.0	107.4	118.2	128.9	139.7	150.4	157.5
87.5°	32.4	42.6	52.8	63.1	73.3	83.8	94.6	105.4	116.3	127.1	134.3
90°	20.2	32.2	44.2	56.2	68.3	80.3	92.3	104.4	116.4	128.6	136.7
92.5°	37.9	49.3	60.7	72.1	83.5	95.0	106.5	118.1	129.6	141.1	148.7
95°	74.4	84.3	94.2	104.1	114.0	124.6	136.0	147.3	158.8	170.1	177.1
97.5°	118.4	126.7	135.1	143.5	151.9	161.9	173.4	184.9	196.4	207.9	215.0
100°	152.9	160.1	167.1	174.2	181.4	190.6	201.9	213.2	224.5	235.9	242.8
102.5°	190.1	195.8	201.7	207.4	213.2	221.6	232.6	243.5	254.5	265.4	272.4
105°	244.5	249.5	254.5	259.5	264.5	271.9	281.7	291.3	301.0	310.8	317.4
107.5°	303.8	308.0	312.1	316.3	320.5	326.9	335.4	343.9	352.3	360.8	367.3
110°	343.3	347.0	350.8	354.6	358.4	364.4	372.5	380.6	388.8	396.9	401.9



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	384.4	387.4	390.4	393.4	396.5	401.8	409.4	417.0	424.5	432.1	437.3
115°	446.0	448.1	450.2	452.4	454.5	459.2	466.4	473.5	480.8	488.0	493.0
117.5°	504.9	506.4	508.0	509.4	510.9	515.0	521.8	528.6	535.4	542.2	546.4
120°	543.6	545.2	546.8	548.5	550.1	554.0	560.3	566.5	572.8	579.1	582.7
122.5°	584.7	585.2	585.7	586.2	586.7	590.2	596.3	602.6	608.8	615.0	619.0
125°	644.4	644.1	643.9	643.7	643.4	646.2	651.9	657.6	663.4	669.1	673.2
127.5°	699.2	699.6	700.0	700.4	700.9	703.3	707.5	711.7	715.9	720.1	724.0
130°	737.0	737.5	737.9	738.3	738.8	740.9	744.7	748.5	752.3	756.2	760.0
132.5°	776.6	776.8	777.1	777.3	777.6	779.1	782.0	784.9	787.8	790.6	794.3
135°	827.7	829.0	830.4	831.7	833.0	834.6	836.3	837.9	839.6	841.2	844.7
137.5°	884.5	884.9	885.3	885.8	886.1	886.9	888.1	889.2	890.4	891.5	894.4
140°	922.4	922.6	922.8	923.0	923.3	923.5	923.7	923.9	924.2	924.4	927.4
142.5°	956.2	956.6	957.0	957.5	957.9	957.9	957.6	957.3	956.9	956.6	959.3
145°	1004.0	1004.7	1005.3	1006.0	1006.6	1007.0	1007.3	1007.5	1007.7	1007.9	1009.2
147.5°	1051.6	1052.4	1053.3	1054.1	1054.9	1055.3	1055.1	1054.9	1054.7	1054.6	1054.6
150°	1080.7	1081.3	1082.0	1082.6	1083.3	1083.6	1083.6	1083.6	1083.6	1083.6	1083.6
152.5°	1107.2	1107.7	1108.1	1108.6	1109.1	1109.4	1109.6	1109.8	1110.0	1110.1	1110.8
155°	1149.1	1149.1	1149.1	1149.1	1149.1	1149.0	1148.7	1148.5	1148.3	1148.1	1149.0
157.5°	1184.6	1184.2	1183.8	1183.4	1183.0	1182.8	1182.7	1182.7	1182.7	1182.6	1183.3
160°	1205.6	1205.3	1205.1	1204.9	1204.7	1204.5	1204.2	1204.0	1203.8	1203.6	1204.2
162.5°	1224.9	1224.4	1223.8	1223.1	1222.5	1222.1	1221.9	1221.7	1221.5	1221.2	1222.4
165°	1250.9	1250.2	1249.6	1248.9	1248.2	1247.7	1247.2	1246.8	1246.3	1245.9	1247.2
167.5°	1270.9	1269.9	1269.0	1268.1	1267.1	1266.7	1266.7	1266.8	1266.8	1266.9	1268.2
170°	1282.1	1281.0	1279.9	1278.8	1277.7	1277.2	1277.5	1277.7	1277.9	1278.1	1279.5
172.5°	1290.2	1289.3	1288.4	1287.4	1286.5	1286.0	1286.1	1286.1	1286.2	1286.2	1287.7
175°	1301.3	1300.2	1299.1	1298.0	1296.9	1296.2	1296.0	1295.7	1295.5	1295.3	1296.9
177.5°	1304.9	1304.0	1303.1	1302.2	1301.3	1300.9	1300.9	1300.9	1300.9	1300.9	1302.1
180°	1303.3	1303.3	1303.3	1303.3	1303.3	1303.3	1303.3	1303.3	1303.3	1303.3	1303.3



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	959.3	959.3	959.3	959.3	959.3	959.3	959.3	959.3
2.5°	955.8	957.3	958.6	959.2	959.0	958.8	958.6	958.4
5°	953.4	955.3	957.2	958.1	957.8	957.6	957.4	957.0
7.5°	948.3	950.4	952.6	953.5	953.3	953.0	952.8	952.6
10°	943.1	945.2	947.5	948.4	948.2	947.9	947.7	947.5
12.5°	935.8	937.9	939.8	940.7	940.7	940.6	940.6	940.5
15°	922.7	924.8	927.0	928.0	927.8	927.5	927.3	927.0
17.5°	906.7	908.9	911.1	912.1	911.9	911.7	911.5	911.3
20°	894.1	896.6	899.0	900.2	900.2	900.2	900.2	900.2
22.5°	879.6	881.9	884.3	885.8	886.2	886.5	886.9	887.3
25°	857.1	859.7	862.3	863.7	863.9	864.2	864.4	864.7
27.5°	831.7	834.1	836.7	838.0	838.3	838.6	838.9	839.1
30°	814.1	816.7	819.3	820.9	821.4	821.8	822.3	822.8
32.5°	796.0	799.0	801.9	803.8	804.2	804.7	805.2	805.7
35°	767.2	770.5	773.9	775.9	776.6	777.3	778.1	778.8
37.5°	737.2	740.6	744.0	746.1	746.8	747.6	748.3	749.1
40°	716.1	719.7	723.3	725.5	726.5	727.4	728.4	729.3
42.5°	695.4	699.3	703.3	705.7	706.4	707.2	708.0	708.7
45°	663.4	667.4	671.5	674.1	675.3	676.5	677.7	678.8
47.5°	629.4	633.7	637.9	640.7	642.2	643.6	645.0	646.4
50°	605.7	610.5	615.2	618.3	619.8	621.3	622.7	624.1
52.5°	581.7	586.4	591.2	594.3	595.7	597.1	598.5	600.1
55°	545.5	550.4	555.1	558.3	559.7	561.1	562.5	563.9
57.5°	507.7	513.3	519.0	522.5	523.8	525.1	526.5	527.9
60°	481.5	487.0	492.4	496.1	498.1	500.0	501.9	503.8
62.5°	455.7	461.2	466.7	470.4	472.3	474.2	476.1	478.0
65°	415.9	421.8	427.8	431.7	433.6	435.6	437.4	439.3
67.5°	376.7	382.7	388.8	392.7	394.7	396.5	398.4	400.2
70°	349.1	355.6	362.0	366.1	367.7	369.4	371.0	372.7
72.5°	323.0	329.2	335.5	339.5	341.3	343.3	345.1	347.0
75°	283.0	289.6	296.4	300.7	303.0	305.1	307.2	309.3
77.5°	245.8	252.6	259.3	263.9	266.2	268.4	270.7	273.1
80°	221.7	228.8	236.0	240.4	242.4	244.3	246.2	248.1
82.5°	197.9	205.3	212.7	217.4	219.4	221.6	223.7	225.8
85°	164.7	171.9	179.0	183.8	186.2	188.5	191.0	193.4
87.5°	141.5	148.7	155.8	160.6	162.8	164.9	167.1	169.4
90°	145.0	153.3	161.6	166.9	169.3	171.6	174.0	176.3
92.5°	156.2	163.7	171.3	176.1	178.2	180.5	182.7	184.8
95°	184.3	191.4	198.5	203.2	205.3	207.4	209.6	211.8
97.5°	222.1	229.1	236.2	240.8	242.8	244.9	246.9	248.9
100°	249.6	256.5	263.5	267.7	269.4	271.0	272.8	274.4
102.5°	279.2	286.1	293.0	297.4	299.4	301.5	303.6	305.6
105°	324.1	330.7	337.4	341.9	344.6	347.1	349.7	352.2
107.5°	373.9	380.3	386.8	390.9	392.5	394.3	395.9	397.6
110°	407.0	412.0	417.1	420.9	423.4	426.1	428.6	431.2





TEST NUMBER: P332611-840

CATALOG NUMBER: S124DIP-S795D1035U840-4F0-1E-UDD-D1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	442.5	447.8	452.9	456.6	458.6	460.7	462.7	464.7
115°	498.0	503.0	508.1	511.3	512.7	514.2	515.6	517.1
117.5°	550.6	554.8	559.0	561.8	563.3	564.7	566.2	567.6
120°	586.3	590.0	593.6	596.6	599.0	601.4	603.7	606.0
122.5°	623.1	627.0	631.1	633.6	634.5	635.4	636.3	637.2
125°	677.3	681.4	685.5	688.0	689.0	690.0	690.9	692.0
127.5°	727.8	731.6	735.6	738.1	739.3	740.6	741.8	743.2
130°	763.9	767.7	771.5	773.8	774.3	774.9	775.4	775.9
132.5°	798.0	801.6	805.3	807.6	808.7	809.8	810.8	811.9
135°	848.0	851.4	854.7	856.8	857.6	858.3	859.1	859.8
137.5°	897.4	900.3	903.1	905.2	906.6	908.0	909.3	910.6
140°	930.2	933.1	935.9	937.9	938.9	939.9	940.8	941.8
142.5°	962.0	964.6	967.3	969.2	970.1	971.1	972.0	973.0
145°	1010.4	1011.6	1012.8	1013.6	1013.8	1014.1	1014.4	1014.7
147.5°	1054.6	1054.6	1054.6	1054.9	1055.4	1055.9	1056.5	1057.0
150°	1083.6	1083.6	1083.6	1083.5	1083.3	1083.0	1082.8	1082.6
152.5°	1111.3	1111.8	1112.4	1112.4	1111.8	1111.2	1110.5	1109.9
155°	1149.9	1150.7	1151.7	1151.7	1150.7	1149.9	1149.0	1148.1
157.5°	1183.9	1184.6	1185.3	1185.2	1184.5	1183.7	1183.0	1182.1
160°	1204.9	1205.6	1206.2	1206.0	1204.9	1203.8	1202.6	1201.5
162.5°	1223.7	1224.9	1226.1	1226.2	1225.1	1224.0	1222.8	1221.6
165°	1248.6	1249.9	1251.2	1251.4	1250.6	1249.7	1248.8	1247.9
167.5°	1269.5	1270.9	1272.2	1272.2	1270.8	1269.4	1268.0	1266.7
170°	1280.8	1282.1	1283.5	1283.3	1281.8	1280.2	1278.7	1277.1
172.5°	1289.2	1290.7	1292.3	1292.2	1290.7	1289.1	1287.6	1286.0
175°	1298.4	1300.0	1301.5	1301.5	1300.0	1298.4	1296.9	1295.3
177.5°	1303.4	1304.6	1306.0	1305.9	1304.4	1302.9	1301.5	1300.1
180°	1303.3	1303.3	1303.3	1303.3	1303.3	1303.3	1303.3	1303.3

(END OF REPORT)