

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: P332620-840

Luminaire Tested: **S124DIP-S795D1205U840-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332620-840  
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-S795D1205U840-4F0-1E-UDD-D1  
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 795 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 1205 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7483.3 lumens  
Efficiency: N/A  
Efficacy: 131.5 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

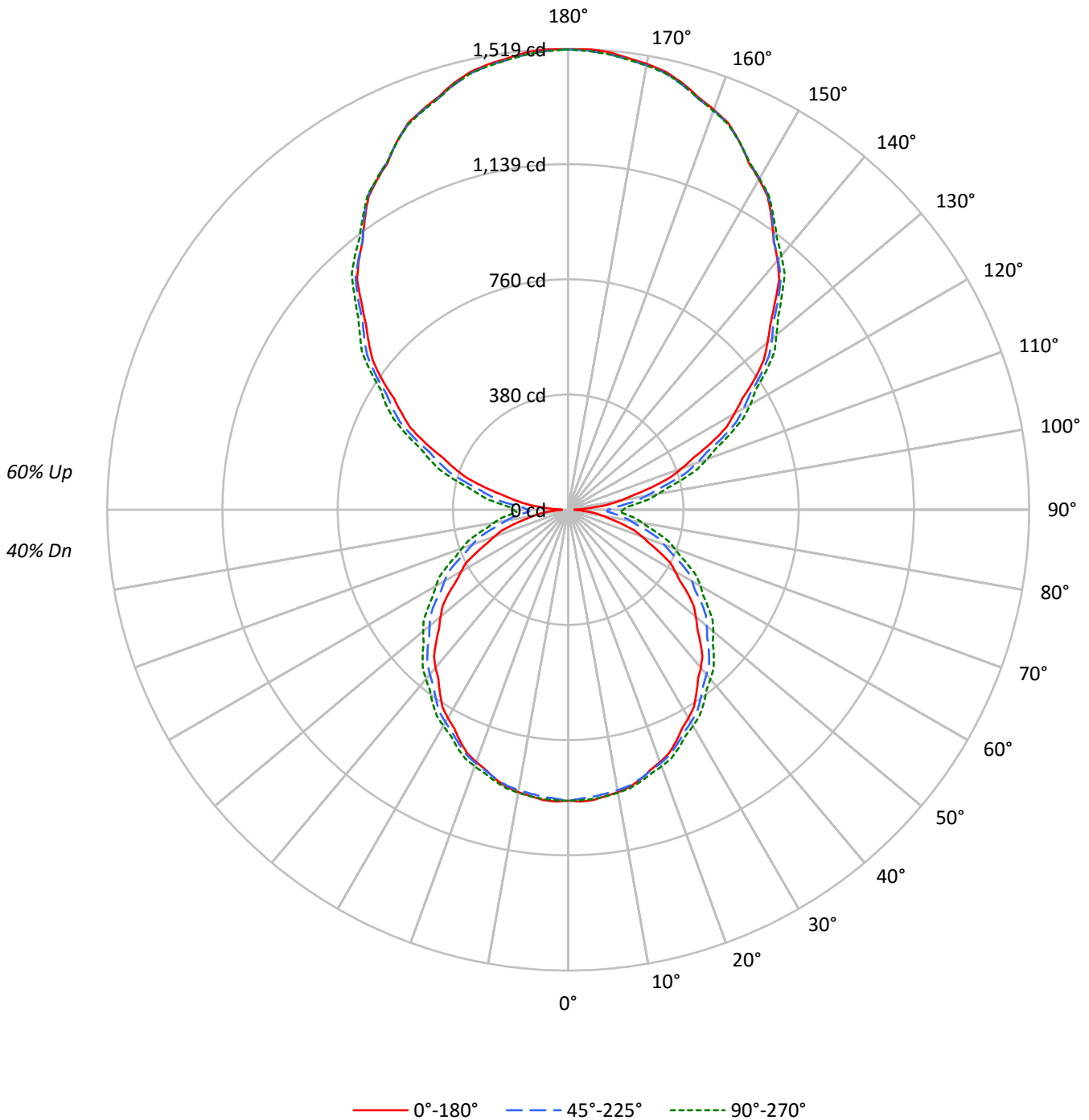
Input Watts (W): 56.9  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	105	105	105	105	96	96	96	96	78	78	78	62	62	62	47	47	47	40
1	95	90	86	82	86	82	79	75	67	65	62	53	52	50	41	39	38	32
2	86	78	72	66	78	71	66	61	58	54	51	46	43	41	35	33	32	26
3	78	68	61	55	71	62	56	51	51	46	42	41	37	34	31	29	26	22
4	71	60	52	46	65	55	48	43	45	40	36	36	32	29	27	25	23	19
5	65	54	45	39	59	49	42	36	40	35	31	32	28	25	25	22	19	16
6	60	48	40	34	54	44	37	31	36	31	26	29	25	22	22	19	17	14
7	55	43	35	29	50	39	32	27	33	27	23	26	22	19	20	17	15	12
8	51	39	31	26	47	36	29	24	30	24	20	24	20	17	19	16	13	11
9	48	35	28	23	43	33	26	21	27	22	18	22	18	15	17	14	12	10
10	45	32	25	20	40	30	23	19	25	20	16	20	16	14	16	13	11	9

**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	1.2
10°-20°	260.3	3.5
20°-30°	393.5	5.3
30°-40°	476.1	6.4
40°-50°	503.4	6.7
50°-60°	473.7	6.3
60°-70°	393.1	5.3
70°-80°	276.1	3.7
80°-90°	160.6	2.1
90°-100°	192.7	2.6
100°-110°	365.0	4.9
110°-120°	549.1	7.3
120°-130°	689.3	9.2
130°-140°	756.2	10.1
140°-150°	734.4	9.8
150°-160°	615.7	8.2
160°-170°	409.7	5.5
170°-180°	143.5	1.9
0°-30°	744.6	10.0
0°-40°	1220.8	16.3
0°-60°	2197.9	29.4
0°-90°	3027.6	40.5
90°-120°	1106.9	14.8
90°-150°	3286.8	43.9
90°-180°	4456.0	59.5
0°-180°	7483.3	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°	21	77	132	169	181	16
95°	84	131	183	214	225	89
105°	283	307	350	379	393	301
115°	518	529	560	581	588	511
125°	749	750	774	791	796	668
135°	963	970	978	992	995	745
145°	1168	1172	1173	1178	1179	731
155°	1338	1337	1336	1340	1336	615
165°	1456	1453	1450	1456	1452	410
175°	1515	1509	1508	1515	1508	144
180°	1517	1517	1517	1517	1517	



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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°	32.5	42.8	53.1	63.4	73.7	84.3	95.2	106.1	116.9	127.8	135.0
90°	20.7	33.1	45.5	58.0	70.4	82.7	95.1	107.4	119.8	132.2	140.7
92.5°	41.4	53.3	65.2	77.1	89.0	100.8	112.5	124.2	135.9	147.6	155.3
95°	84.3	94.6	104.8	115.0	125.2	136.1	147.7	159.4	171.0	182.6	189.9
97.5°	135.6	144.3	153.0	161.6	170.3	180.5	192.4	204.2	216.0	227.8	235.0
100°	176.1	183.3	190.6	197.8	205.1	214.5	226.2	237.8	249.5	261.2	268.1
102.5°	219.2	225.1	231.0	236.8	242.7	251.3	262.5	273.8	285.0	296.3	303.3
105°	283.1	288.1	293.1	298.1	303.2	310.6	320.5	330.4	340.2	350.1	356.9
107.5°	352.0	356.3	360.5	364.8	369.0	375.4	383.8	392.3	400.8	409.4	416.0
110°	398.1	402.0	405.9	409.7	413.5	419.5	427.7	435.8	443.8	451.9	456.9



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	446.1	449.1	452.2	455.2	458.3	463.6	471.1	478.6	486.1	493.6	498.8
115°	518.0	520.2	522.3	524.4	526.5	531.2	538.4	545.4	552.6	559.7	564.7
117.5°	586.7	588.2	589.8	591.3	592.8	596.8	603.6	610.4	617.1	623.9	627.9
120°	631.9	633.7	635.4	637.1	638.9	642.9	649.0	655.2	661.3	667.4	671.0
122.5°	679.7	680.3	680.9	681.5	682.0	685.4	691.6	697.7	703.9	710.0	714.0
125°	749.3	749.1	748.8	748.6	748.4	751.1	756.8	762.5	768.2	774.0	777.9
127.5°	813.1	813.7	814.3	814.8	815.4	817.7	821.8	826.1	830.2	834.4	838.1
130°	857.4	857.9	858.5	859.0	859.5	861.7	865.6	869.4	873.1	877.0	880.8
132.5°	903.3	903.7	904.0	904.3	904.6	906.3	909.1	912.0	914.8	917.7	921.2
135°	963.0	964.6	966.1	967.8	969.3	970.9	972.6	974.2	975.9	977.7	980.9
137.5°	1029.3	1029.8	1030.2	1030.7	1031.2	1032.1	1033.3	1034.5	1035.7	1036.9	1039.8
140°	1073.3	1073.6	1073.9	1074.2	1074.5	1074.7	1075.0	1075.2	1075.4	1075.7	1078.5
142.5°	1112.9	1113.3	1113.8	1114.3	1114.7	1114.8	1114.5	1114.1	1113.8	1113.4	1116.1
145°	1168.5	1169.2	1170.0	1170.8	1171.6	1172.3	1172.5	1172.8	1173.0	1173.3	1174.5
147.5°	1223.9	1224.9	1225.9	1226.9	1227.9	1228.3	1228.1	1227.9	1227.7	1227.5	1227.5
150°	1257.6	1258.4	1259.2	1260.0	1260.8	1261.2	1261.2	1261.2	1261.2	1261.2	1261.2
152.5°	1288.7	1289.3	1289.8	1290.4	1291.0	1291.4	1291.6	1291.8	1292.0	1292.2	1292.8
155°	1337.5	1337.5	1337.5	1337.5	1337.5	1337.4	1337.2	1336.9	1336.6	1336.4	1337.4
157.5°	1378.8	1378.4	1377.9	1377.5	1377.0	1376.6	1376.6	1376.5	1376.5	1376.4	1377.3
160°	1403.2	1403.0	1402.7	1402.4	1402.2	1401.9	1401.7	1401.4	1401.1	1400.9	1401.7
162.5°	1425.7	1425.0	1424.4	1423.7	1423.0	1422.6	1422.3	1422.1	1421.8	1421.5	1422.9
165°	1456.0	1455.2	1454.4	1453.7	1452.9	1452.2	1451.7	1451.2	1450.7	1450.2	1451.7
167.5°	1479.3	1478.1	1477.0	1475.9	1474.9	1474.3	1474.4	1474.4	1474.5	1474.5	1476.1
170°	1492.4	1491.1	1489.8	1488.4	1487.1	1486.6	1486.9	1487.1	1487.4	1487.7	1489.2
172.5°	1501.8	1500.7	1499.5	1498.4	1497.4	1496.8	1496.9	1497.0	1497.0	1497.1	1498.8
175°	1514.7	1513.4	1512.1	1510.8	1509.4	1508.6	1508.4	1508.1	1507.9	1507.6	1509.4
177.5°	1518.9	1517.8	1516.8	1515.8	1514.7	1514.2	1514.2	1514.2	1514.2	1514.2	1515.7
180°	1517.0	1517.0	1517.0	1517.0	1517.0	1517.0	1517.0	1517.0	1517.0	1517.0	1517.0



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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°	142.3	149.6	156.7	161.5	163.7	165.9	168.1	170.3
90°	149.2	157.6	166.1	171.6	174.0	176.4	178.8	181.3
92.5°	163.0	170.7	178.3	183.3	185.5	187.7	190.0	192.2
95°	197.0	204.3	211.6	216.2	218.3	220.6	222.7	224.8
97.5°	242.2	249.4	256.6	261.3	263.3	265.3	267.4	269.4
100°	275.1	282.1	289.0	293.4	295.0	296.7	298.3	300.0
102.5°	310.2	317.2	324.2	328.7	330.8	332.9	335.0	337.0
105°	363.7	370.4	377.1	381.8	384.6	387.3	389.9	392.6
107.5°	422.5	429.2	435.8	439.9	441.6	443.2	444.9	446.6
110°	461.8	466.9	471.8	475.6	478.3	481.0	483.7	486.4





TEST NUMBER: P332620-840

CATALOG NUMBER: S124DIP-S795D1205U840-4F0-1E-UDD-D1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	504.0	509.2	514.4	518.1	520.1	522.2	524.2	526.3
115°	569.7	574.6	579.7	582.8	584.2	585.6	587.0	588.4
117.5°	632.0	636.1	640.2	642.9	644.3	645.7	647.1	648.4
120°	674.4	677.8	681.4	684.3	686.7	689.1	691.6	694.0
122.5°	717.8	721.8	725.6	727.9	728.7	729.5	730.3	731.0
125°	781.9	786.0	790.0	792.4	793.3	794.3	795.2	796.1
127.5°	841.9	845.7	849.5	851.9	853.1	854.3	855.6	856.8
130°	884.5	888.3	892.1	894.1	894.5	894.9	895.3	895.8
132.5°	924.8	928.4	932.0	934.3	935.3	936.3	937.4	938.4
135°	984.2	987.5	990.8	992.8	993.4	994.1	994.7	995.3
137.5°	1042.6	1045.4	1048.1	1050.3	1051.6	1053.0	1054.3	1055.7
140°	1081.4	1084.2	1087.0	1088.9	1089.8	1090.8	1091.8	1092.7
142.5°	1118.7	1121.4	1124.1	1125.9	1126.8	1127.8	1128.7	1129.6
145°	1175.6	1176.8	1177.9	1178.6	1178.8	1178.9	1179.1	1179.3
147.5°	1227.4	1227.4	1227.4	1227.6	1228.1	1228.6	1229.1	1229.6
150°	1261.2	1261.2	1261.2	1261.1	1260.8	1260.6	1260.3	1260.1
152.5°	1293.4	1294.1	1294.7	1294.7	1294.0	1293.3	1292.6	1292.0
155°	1338.5	1339.5	1340.5	1340.5	1339.5	1338.5	1337.4	1336.4
157.5°	1378.1	1378.8	1379.6	1379.6	1378.7	1377.8	1376.8	1376.0
160°	1402.4	1403.2	1404.0	1403.7	1402.4	1401.1	1399.9	1398.6
162.5°	1424.3	1425.7	1427.1	1427.2	1425.9	1424.6	1423.3	1422.0
165°	1453.3	1454.8	1456.4	1456.6	1455.6	1454.6	1453.5	1452.5
167.5°	1477.6	1479.3	1480.8	1480.8	1479.1	1477.5	1475.9	1474.3
170°	1490.9	1492.4	1494.0	1493.8	1492.0	1490.2	1488.3	1486.5
172.5°	1500.7	1502.4	1504.2	1504.2	1502.3	1500.5	1498.6	1496.8
175°	1511.3	1513.1	1514.9	1514.9	1513.1	1511.3	1509.4	1507.6
177.5°	1517.1	1518.6	1520.0	1519.9	1518.2	1516.6	1514.9	1513.3
180°	1517.0	1517.0	1517.0	1517.0	1517.0	1517.0	1517.0	1517.0

(END OF REPORT)