

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: P332601

Luminaire Tested: **SA4XXDIP-C795D810U835-4F0-1E-UDD-D**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P332601
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-6,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA4XXDIP-C795D810U835-4F0-1E-UDD-D
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 795 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 810 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

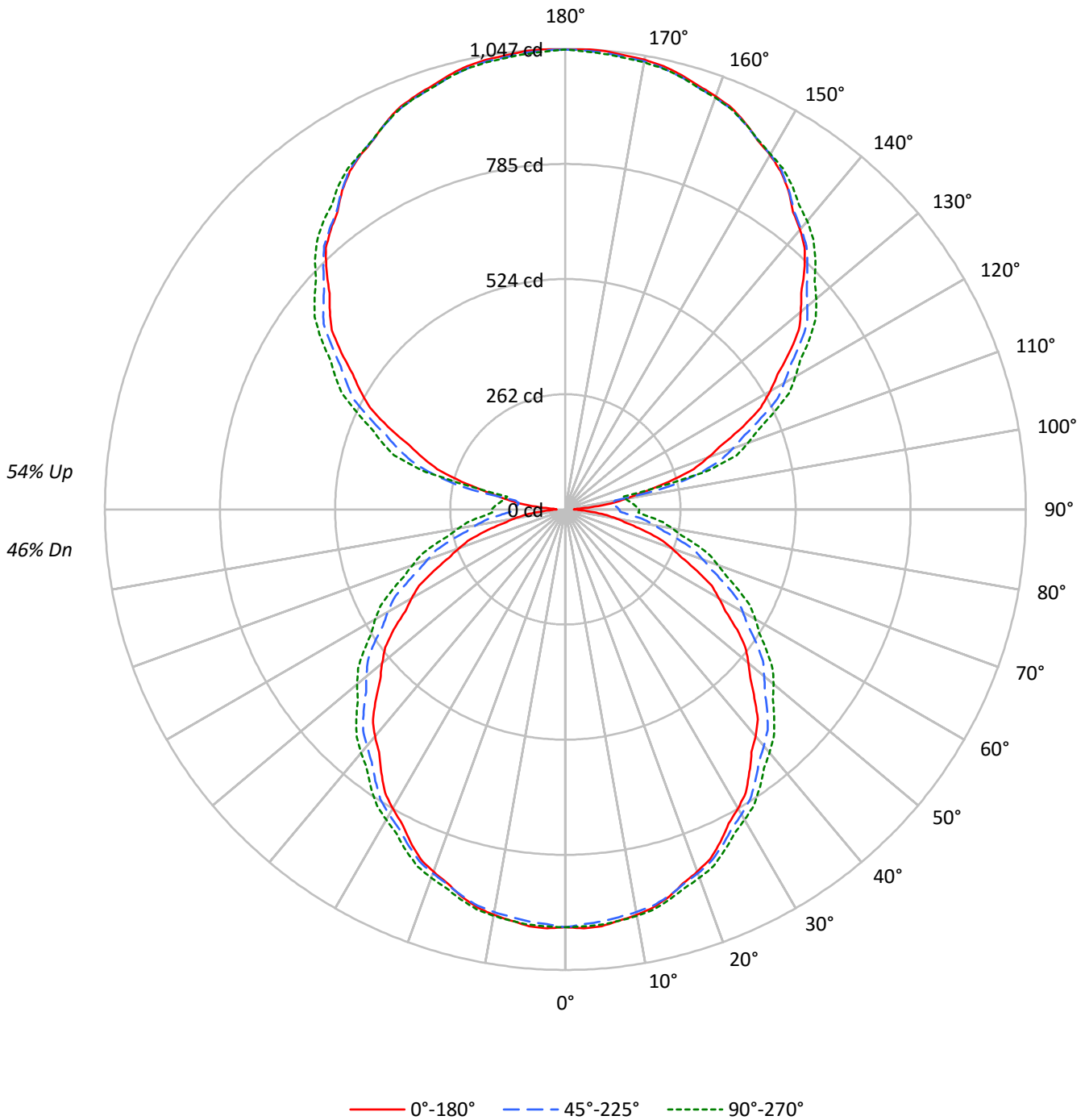
Lumens per Lamp: N/A
Luminaire Lumens: 6474.7 lumens
Efficiency: N/A
Efficacy: 141.1 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.08')
CIE Type: General Diffuse

Input Watts (W): 45.9
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	106	106	106	106	98	98	98	98	81	81	81	66	66	66	53	53	53	46
1	96	91	87	83	88	84	80	77	70	67	65	57	55	53	45	44	43	37
2	87	79	73	67	79	73	67	62	61	56	53	49	46	44	39	37	35	30
3	79	69	62	55	72	64	57	52	53	48	44	43	40	37	34	32	29	25
4	72	61	53	47	66	56	49	43	47	41	37	38	34	31	30	28	25	21
5	66	54	46	40	60	50	43	37	42	36	32	34	30	27	27	24	22	18
6	61	48	40	34	55	45	37	32	38	32	28	31	27	23	25	21	19	16
7	56	44	36	30	51	40	33	28	34	28	24	28	24	20	22	19	17	14
8	52	40	32	26	48	37	30	25	31	25	21	26	21	18	21	17	15	12
9	48	36	28	23	44	33	27	22	28	23	19	24	19	16	19	16	13	11
10	45	33	26	21	41	31	24	20	26	21	17	22	18	15	18	14	12	10

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7668	7668	7668
5°	7692	7494	7516
10°	7645	7371	7366
15°	7577	7230	7190
20°	7473	7073	7019
25°	7357	6898	6831
30°	7231	6723	6637
35°	7088	6544	6468
40°	6974	6374	6291
45°	6804	6217	6140
50°	6661	6036	5980
55°	6513	5866	5792
60°	6282	5649	5621
65°	6029	5415	5409
70°	5722	5149	5165
75°	5296	4857	4943
80°	4819	4575	4724
85°	4219	4325	4598



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	89.9	1.4
10°-20°	257.7	4.0
20°-30°	389.7	6.0
30°-40°	471.5	7.3
40°-50°	498.5	7.7
50°-60°	469.1	7.2
60°-70°	389.2	6.0
70°-80°	273.4	4.2
80°-90°	157.6	2.4
90°-100°	127.5	2.0
100°-110°	295.9	4.6
110°-120°	481.7	7.4
120°-130°	579.3	8.9
130°-140°	603.4	9.3
140°-150°	556.1	8.6
150°-160°	446.7	6.9
160°-170°	288.1	4.4
170°-180°	99.3	1.5
0°-30°	737.4	11.4
0°-40°	1208.8	18.7
0°-60°	2176.4	33.6
0°-90°	2996.6	46.3
90°-120°	905.1	14.0
90°-150°	2644.0	40.8
90°-180°	3478.0	53.7
0°-180°	6474.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	950	950	950	950	950	
5°	951	948	940	948	948	90
15°	912	912	909	918	918	257
25°	834	840	844	855	856	384
35°	730	742	753	767	771	457
45°	608	629	649	666	672	470
55°	476	499	531	551	558	424
65°	330	364	400	426	435	327
75°	183	223	267	296	306	195
85°	56	101	149	180	192	60
90°	19	71	122	157	168	13
95°	57	67	110	142	154	66
105°	245	272	314	345	328	257
115°	446	459	491	515	523	439
125°	622	625	649	671	679	555
135°	768	768	778	796	805	592
145°	885	886	886	893	899	553
155°	969	969	967	970	968	447
165°	1022	1018	1018	1024	1017	289
175°	1045	1041	1042	1048	1039	100
180°	1045	1045	1045	1045	1045	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	949.9	949.9	949.9	949.9	949.9	949.9	949.9	949.9	949.9	949.9	949.9
2.5°	953.3	952.7	952.1	951.6	951.0	950.0	948.4	946.9	945.4	943.9	945.2
5°	950.9	950.2	949.5	948.8	948.1	946.9	945.2	943.6	941.9	940.3	942.2
7.5°	942.8	942.4	942.0	941.6	941.1	940.2	938.9	937.5	936.1	934.8	936.9
10°	936.0	935.8	935.6	935.3	935.1	934.4	933.2	932.0	930.8	929.6	931.8
12.5°	926.7	926.6	926.6	926.5	926.5	926.1	925.3	924.4	923.6	922.8	924.8
15°	911.6	911.8	912.0	912.3	912.5	912.3	911.6	910.9	910.1	909.4	911.6
17.5°	890.9	891.6	892.3	893.1	893.8	894.0	893.9	893.8	893.6	893.5	895.7
20°	876.5	877.2	877.9	878.6	879.3	879.8	880.0	880.2	880.5	880.7	883.1
22.5°	860.3	861.2	862.1	863.0	863.9	864.6	865.0	865.4	865.8	866.3	868.6
25°	833.9	835.3	836.8	838.2	839.6	840.7	841.4	842.1	842.8	843.5	846.1
27.5°	804.6	806.6	808.7	810.8	812.9	814.5	815.6	816.6	817.7	818.8	821.2
30°	785.0	786.9	788.8	790.7	792.6	794.3	796.0	797.6	799.3	800.9	803.5
32.5°	763.7	766.0	768.3	770.5	772.8	774.8	776.7	778.5	780.4	782.2	785.2
35°	729.7	732.5	735.4	738.2	741.0	743.6	746.0	748.4	750.7	753.1	756.4
37.5°	695.4	698.7	702.0	705.2	708.5	711.6	714.5	717.4	720.4	723.3	726.7
40°	673.3	676.4	679.4	682.5	685.6	688.8	692.1	695.4	698.7	702.0	705.6
42.5°	647.8	651.2	654.7	658.1	661.6	665.2	669.1	673.0	676.9	680.7	684.7
45°	608.4	612.9	617.4	621.9	626.4	630.9	635.4	639.9	644.3	648.8	652.9
47.5°	570.8	575.4	580.0	584.7	589.3	594.2	599.4	604.6	609.8	615.0	619.2
50°	543.5	548.7	553.9	559.1	564.3	569.5	574.7	579.9	585.1	590.3	595.1
52.5°	516.3	521.5	526.7	531.9	537.1	542.7	548.6	554.6	560.6	566.5	571.2
55°	476.5	481.5	486.5	491.4	496.4	502.4	509.5	516.6	523.7	530.8	535.5
57.5°	432.1	438.2	444.4	450.5	456.6	463.2	470.3	477.3	484.4	491.4	497.0
60°	403.1	409.3	415.4	421.6	427.7	434.7	442.5	450.3	458.1	465.9	471.3
62.5°	375.0	381.8	388.5	395.2	401.9	409.2	417.0	424.8	432.6	440.4	445.8
65°	329.7	337.3	344.9	352.4	360.0	367.8	375.8	383.9	391.9	399.9	405.8
67.5°	286.1	294.2	302.2	310.2	318.3	326.6	335.2	343.8	352.4	361.0	367.0
70°	256.3	264.4	272.4	280.5	288.5	297.0	306.0	315.0	323.9	332.9	339.3
72.5°	227.4	235.6	243.9	252.1	260.3	269.2	278.8	288.3	297.9	307.4	313.6
75°	183.0	191.7	200.4	209.2	217.9	227.3	237.2	247.1	257.1	267.0	273.6
77.5°	141.5	150.7	160.0	169.3	178.5	188.4	198.8	209.2	219.6	230.0	236.7
80°	115.9	125.4	134.8	144.3	153.8	163.7	174.1	184.5	194.9	205.3	212.4
82.5°	90.4	100.2	110.1	119.9	129.7	139.9	150.3	160.7	171.1	181.5	188.7
85°	56.4	66.3	76.2	86.2	96.1	106.4	117.0	127.6	138.3	148.9	156.0
87.5°	32.0	42.0	52.0	62.0	72.1	82.4	93.0	103.6	114.3	124.9	132.0
90°	19.4	30.7	42.1	53.5	64.8	76.3	87.8	99.4	111.0	122.5	130.4
92.5°	26.0	34.6	43.2	51.9	60.5	70.6	82.1	93.7	105.2	116.8	124.5
95°	56.8	58.7	60.6	62.5	64.4	70.3	80.1	90.0	99.9	109.7	117.2
97.5°	103.9	114.3	124.7	135.1	145.5	145.8	136.0	126.2	116.4	106.6	112.9
100°	139.9	149.2	158.5	167.8	177.0	174.3	159.5	144.8	130.0	115.2	118.7
102.5°	181.2	188.9	196.6	204.3	211.9	218.7	224.6	230.5	236.4	242.3	216.7
105°	244.9	250.7	256.5	262.2	268.0	275.7	285.3	294.9	304.5	314.2	321.6
107.5°	305.9	310.3	314.6	319.0	323.4	330.4	339.8	349.3	358.7	368.2	374.8
110°	346.3	350.1	353.9	357.8	361.6	368.2	377.5	386.8	396.1	405.4	411.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	385.5	389.3	393.2	397.1	400.9	407.1	415.5	423.8	432.2	440.6	445.8
115°	445.8	448.5	451.1	453.8	456.4	461.4	468.8	476.2	483.6	491.0	496.5
117.5°	501.1	503.1	505.0	507.0	509.0	513.7	521.1	528.5	536.0	543.4	548.2
120°	537.8	539.2	540.6	542.0	543.4	547.4	554.1	560.8	567.5	574.2	579.2
122.5°	572.8	573.4	573.9	574.5	575.1	578.7	585.4	592.1	598.8	605.6	610.5
125°	621.9	622.4	622.9	623.3	623.8	626.8	632.4	637.9	643.5	649.0	654.1
127.5°	669.3	669.2	669.1	669.1	669.0	671.7	677.0	682.3	687.7	693.0	697.2
130°	699.1	699.0	698.9	698.9	698.8	700.9	705.2	709.6	713.9	718.2	722.6
132.5°	727.2	727.3	727.4	727.5	727.5	729.4	733.1	736.8	740.5	744.2	748.4
135°	768.4	768.2	768.0	767.9	767.7	768.8	771.1	773.5	775.8	778.2	782.3
137.5°	805.8	805.6	805.4	805.3	805.1	805.8	807.4	808.9	810.5	812.1	815.9
140°	830.1	830.3	830.4	830.5	830.6	830.9	831.5	832.1	832.7	833.3	836.9
142.5°	851.2	851.8	852.3	852.9	853.5	853.8	853.9	854.0	854.0	854.1	857.2
145°	884.6	884.9	885.2	885.5	885.7	885.9	885.9	885.9	885.9	885.9	887.5
147.5°	911.3	912.1	912.8	913.6	914.3	914.6	914.4	914.2	914.0	913.9	914.2
150°	930.7	931.2	931.6	932.1	932.6	932.7	932.5	932.4	932.2	932.0	932.0
152.5°	946.1	946.7	947.2	947.7	948.2	948.3	948.0	947.7	947.3	947.0	947.3
155°	968.8	968.9	969.1	969.3	969.5	969.3	968.8	968.2	967.7	967.2	967.9
157.5°	988.0	987.9	987.8	987.7	987.6	987.2	986.6	986.1	985.5	984.9	985.8
160°	999.3	998.7	998.2	997.7	997.2	996.8	996.7	996.5	996.3	996.1	997.2
162.5°	1009.3	1008.6	1007.9	1007.3	1006.6	1006.2	1006.0	1005.9	1005.7	1005.5	1006.6
165°	1021.9	1021.1	1020.2	1019.3	1018.5	1018.0	1018.0	1018.0	1018.0	1018.0	1019.4
167.5°	1031.9	1031.0	1030.1	1029.2	1028.3	1027.8	1027.7	1027.6	1027.5	1027.4	1028.9
170°	1037.6	1036.5	1035.5	1034.4	1033.4	1033.0	1033.1	1033.3	1033.5	1033.7	1035.0
172.5°	1041.3	1040.3	1039.2	1038.2	1037.2	1036.7	1036.9	1037.1	1037.2	1037.4	1038.8
175°	1045.4	1044.3	1043.3	1042.3	1041.2	1040.8	1041.0	1041.1	1041.3	1041.5	1043.0
177.5°	1047.3	1046.3	1045.3	1044.3	1043.4	1043.0	1043.3	1043.6	1043.9	1044.1	1045.2
180°	1045.4	1045.4	1045.4	1045.4	1045.4	1045.4	1045.4	1045.4	1045.4	1045.4	1045.4



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	949.9	949.9	949.9	949.9	949.9	949.9	949.9	949.9
2.5°	946.5	947.9	949.2	949.8	949.6	949.4	949.2	949.0
5°	944.1	946.0	947.8	948.7	948.4	948.2	948.0	947.7
7.5°	939.0	941.1	943.3	944.2	944.0	943.7	943.5	943.3
10°	933.9	936.0	938.2	939.1	938.9	938.6	938.4	938.2
12.5°	926.7	928.7	930.6	931.5	931.5	931.4	931.4	931.3
15°	913.7	915.8	917.9	918.9	918.7	918.4	918.2	917.9
17.5°	897.8	900.0	902.2	903.2	903.0	902.8	902.6	902.4
20°	885.4	887.8	890.2	891.4	891.4	891.4	891.4	891.4
22.5°	871.0	873.3	875.7	877.1	877.5	877.8	878.2	878.6
25°	848.7	851.3	853.9	855.3	855.5	855.8	856.0	856.3
27.5°	823.6	826.0	828.5	829.8	830.1	830.4	830.7	830.9
30°	806.1	808.7	811.3	812.9	813.4	813.8	814.3	814.8
32.5°	788.2	791.2	794.1	795.9	796.3	796.8	797.3	797.8
35°	759.7	763.0	766.3	768.3	769.0	769.7	770.5	771.2
37.5°	730.0	733.4	736.7	738.8	739.5	740.3	741.0	741.8
40°	709.1	712.7	716.2	718.4	719.4	720.3	721.3	722.2
42.5°	688.6	692.5	696.4	698.8	699.5	700.3	701.1	701.8
45°	656.9	660.9	664.9	667.5	668.7	669.9	671.1	672.2
47.5°	623.3	627.5	631.7	634.4	635.9	637.3	638.7	640.1
50°	599.8	604.5	609.2	612.3	613.7	615.2	616.6	618.0
52.5°	576.0	580.7	585.4	588.5	589.9	591.3	592.7	594.2
55°	540.2	545.0	549.7	552.8	554.2	555.6	557.0	558.4
57.5°	502.7	508.3	513.9	517.4	518.7	520.0	521.4	522.7
60°	476.8	482.2	487.6	491.3	493.2	495.1	497.0	498.9
62.5°	451.2	456.7	462.1	465.8	467.7	469.6	471.4	473.3
65°	411.8	417.7	423.6	427.5	429.4	431.3	433.1	435.0
67.5°	373.0	379.0	385.0	388.9	390.8	392.6	394.5	396.3
70°	345.7	352.1	358.5	362.5	364.1	365.8	367.4	369.1
72.5°	319.8	326.0	332.2	336.2	338.0	339.9	341.7	343.6
75°	280.2	286.8	293.5	297.8	300.0	302.1	304.2	306.3
77.5°	243.4	250.1	256.8	261.3	263.6	265.8	268.1	270.4
80°	219.5	226.6	233.7	238.1	240.0	241.9	243.8	245.7
82.5°	196.0	203.3	210.6	215.3	217.3	219.4	221.5	223.6
85°	163.1	170.2	177.3	182.0	184.4	186.7	189.1	191.5
87.5°	139.0	146.1	153.2	157.8	159.9	162.1	164.2	166.4
90°	138.3	146.2	154.1	159.2	161.4	163.6	165.9	168.1
92.5°	132.2	139.9	147.6	152.4	154.4	156.4	158.3	160.3
95°	124.6	132.0	139.4	144.3	146.6	148.9	151.2	153.5
97.5°	119.2	125.5	131.8	136.0	138.2	140.4	142.6	144.9
100°	122.1	125.5	129.0	131.6	133.4	135.2	137.1	138.9
102.5°	191.0	165.3	139.7	127.8	129.6	131.5	133.4	135.3
105°	329.1	336.6	344.0	345.6	341.2	336.9	332.5	328.1
107.5°	381.3	387.9	394.5	399.0	401.3	403.7	406.1	408.4
110°	417.0	422.8	428.6	432.7	435.1	437.5	439.9	442.3



TEST NUMBER: P332601

CATALOG NUMBER: SA4XXDIP-C795D810U835-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	451.0	456.1	461.3	465.2	467.7	470.3	472.8	475.4
115°	502.1	507.6	513.2	516.8	518.4	520.1	521.7	523.4
117.5°	553.1	557.9	562.8	566.1	567.9	569.8	571.6	573.4
120°	584.3	589.4	594.5	597.8	599.3	600.9	602.4	604.0
122.5°	615.4	620.4	625.3	628.5	629.8	631.2	632.5	633.9
125°	659.1	664.1	669.1	672.4	674.0	675.6	677.2	678.8
127.5°	701.3	705.5	709.6	712.4	713.9	715.4	716.8	718.3
130°	727.0	731.4	735.9	738.8	740.2	741.6	743.0	744.5
132.5°	752.6	756.9	761.1	763.9	765.1	766.4	767.7	769.0
135°	786.4	790.6	794.7	797.6	799.4	801.2	802.9	804.7
137.5°	819.7	823.6	827.4	829.8	830.9	832.0	833.1	834.2
140°	840.5	844.1	847.7	850.1	851.5	852.8	854.2	855.6
142.5°	860.2	863.3	866.4	868.5	869.5	870.5	871.5	872.6
145°	889.1	890.7	892.3	893.7	895.0	896.3	897.6	898.9
147.5°	914.5	914.9	915.2	915.8	916.7	917.7	918.6	919.5
150°	932.0	932.0	932.0	932.1	932.3	932.4	932.6	932.8
152.5°	947.6	947.9	948.1	948.2	948.1	948.0	947.9	947.8
155°	968.6	969.3	970.0	970.1	969.5	969.0	968.5	968.0
157.5°	986.7	987.6	988.5	988.5	987.6	986.7	985.8	984.9
160°	998.2	999.3	1000.3	1000.3	999.3	998.2	997.2	996.1
162.5°	1007.6	1008.6	1009.7	1009.6	1008.4	1007.2	1006.1	1004.9
165°	1020.8	1022.2	1023.6	1023.5	1021.9	1020.4	1018.8	1017.2
167.5°	1030.5	1032.0	1033.5	1033.4	1031.7	1029.9	1028.2	1026.5
170°	1036.4	1037.8	1039.2	1039.0	1037.3	1035.6	1033.8	1032.1
172.5°	1040.2	1041.6	1043.0	1042.7	1040.9	1039.0	1037.1	1035.2
175°	1044.6	1046.2	1047.7	1047.5	1045.4	1043.3	1041.2	1039.1
177.5°	1046.4	1047.5	1048.6	1048.3	1046.6	1045.0	1043.3	1041.6
180°	1045.4	1045.4	1045.4	1045.4	1045.4	1045.4	1045.4	1045.4

(END OF REPORT)