

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: P331356

Luminaire Tested: **SA2XXDIP-C675D725U835-4F0-1E-UDD-F4**

Issue Date: 10/7/2019

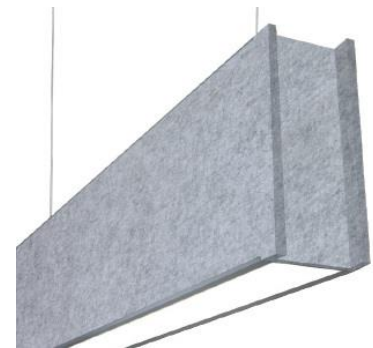
Test Information

Test Method: LM-79-08
Report Number: P331356
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-16,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA2XXDIP-C675D725U835-4F0-1E-UDD-F4
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 675 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 725 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5533.3 lumens
Efficiency: N/A
Efficacy: 120.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.3
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

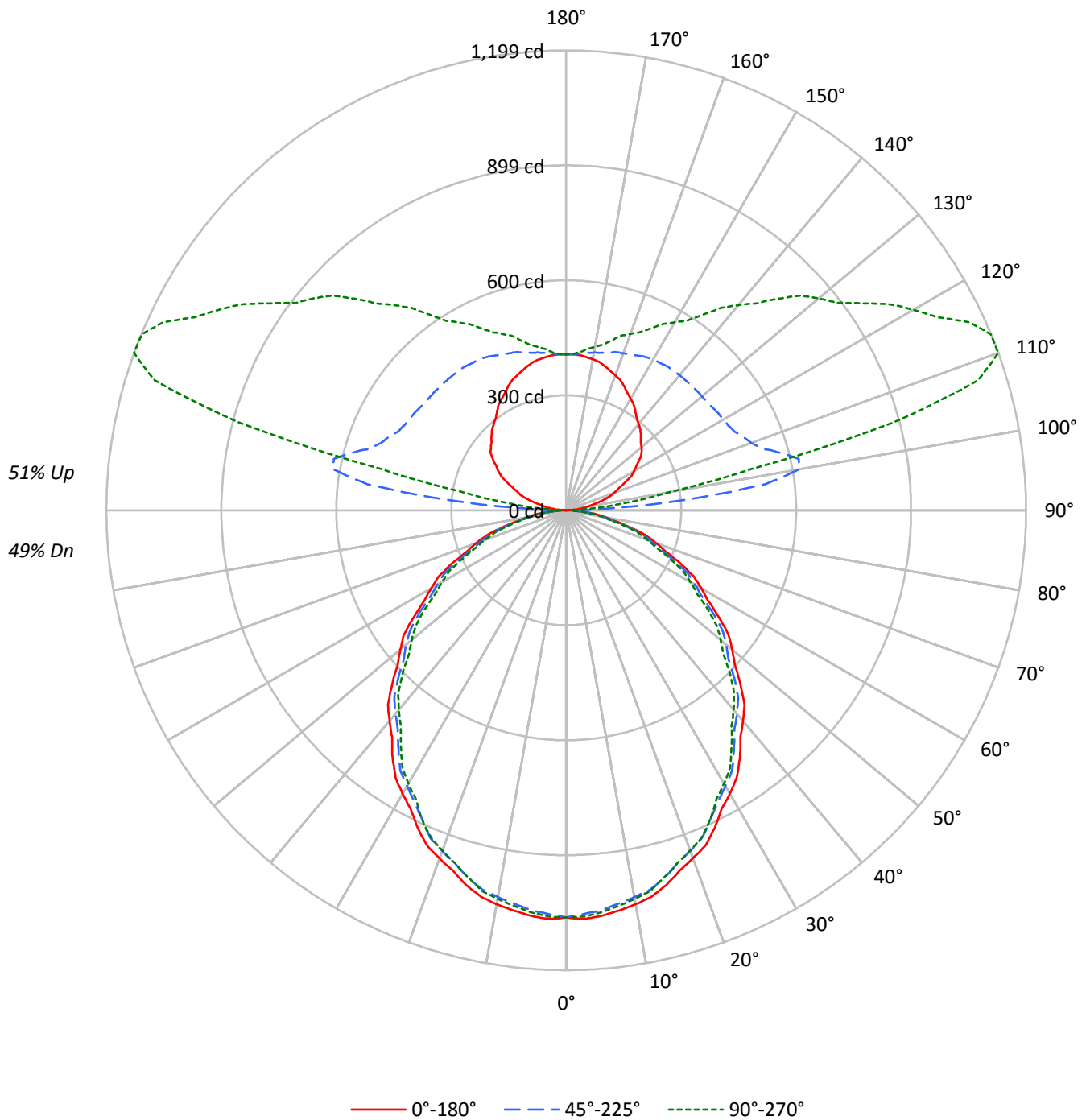
Input Watts (W): 45.9
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	107	107	107	107	98	98	98	98	83	83	83	68	68	68	55	55	55
1	98	93	89	86	90	86	83	80	72	70	68	60	58	57	49	48	46
2	89	81	75	70	82	75	70	65	64	60	56	53	50	47	43	41	39
3	81	72	64	58	74	66	60	55	56	51	47	47	43	40	38	35	33
4	74	63	55	49	68	59	52	46	50	44	40	42	38	34	34	31	29
5	68	56	48	42	62	52	45	40	45	39	35	37	33	30	31	28	25
6	63	51	42	37	58	47	40	35	40	34	30	34	29	26	28	25	22
7	58	46	38	32	53	42	35	30	36	31	27	31	26	23	25	22	20
8	54	41	34	28	49	39	32	27	33	28	24	28	24	21	23	20	18
9	50	38	30	25	46	35	29	24	30	25	21	26	22	19	21	18	16
10	47	35	27	23	43	32	26	21	28	23	19	24	20	17	20	17	14

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	17142	17142	17142
5°	17208	16960	17058
10°	17105	16787	16870
15°	16893	16568	16552
20°	16593	16242	16225
25°	16295	15841	15841
30°	15910	15474	15340
35°	15554	15031	14808
40°	15104	14587	14309
45°	14661	14150	13798
50°	14179	13692	13205
55°	13678	13163	12673
60°	13120	12526	12064
65°	12520	11897	11351
70°	11759	11131	10603
75°	10699	10256	10000
80°	9493	9205	8731
85°	7762	7373	6614

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	99.8	1.8
10°-20°	280.9	5.1
20°-30°	412.9	7.5
30°-40°	479.6	8.7
40°-50°	479.1	8.7
50°-60°	417.8	7.6
60°-70°	308.9	5.6
70°-80°	175.0	3.2
80°-90°	50.7	0.9
90°-100°	162.5	2.9
100°-110°	551.5	10.0
110°-120°	585.9	10.6
120°-130°	482.3	8.7
130°-140°	387.3	7.0
140°-150°	292.7	5.3
150°-160°	205.7	3.7
160°-170°	121.1	2.2
170°-180°	39.4	0.7
0°-30°	793.6	14.3
0°-40°	1273.2	23.0
0°-60°	2170.1	39.2
0°-90°	2704.7	48.9
90°-120°	1300.0	23.5
90°-150°	2462.4	44.5
90°-180°	2829.0	51.1
0°-180°	5533.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1062	1062	1062	1062	1062	
5°	1062	1057	1046	1054	1052	101
15°	1011	1004	991	995	990	284
25°	915	906	889	891	889	421
35°	789	779	763	756	751	492
45°	642	635	620	609	604	495
55°	486	479	468	456	450	434
65°	328	321	311	302	297	324
75°	172	169	164	159	160	183
85°	42	41	40	37	36	48
90°	1	11	27	25	26	4
95°	27	67	306	116	89	29
105°	95	144	579	1035	881	101
115°	168	212	485	1000	1159	167
125°	234	278	466	810	940	208
135°	275	328	460	681	779	213
145°	314	361	458	569	622	197
155°	357	386	445	503	523	164
165°	389	401	426	452	459	110
175°	406	406	410	415	414	39
180°	406	406	406	406	406	

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1061.7	1061.7	1061.7	1061.7	1061.7	1061.7	1061.7	1061.7	1061.7	1061.7	1061.7
2.5°	1066.6	1065.7	1064.8	1063.9	1063.0	1061.5	1059.5	1057.5	1055.5	1053.5	1055.3
5°	1061.7	1060.8	1059.9	1059.0	1058.1	1056.4	1053.9	1051.4	1048.9	1046.4	1048.2
7.5°	1052.3	1050.9	1049.5	1048.1	1046.7	1044.7	1042.2	1039.6	1037.1	1034.5	1036.3
10°	1043.3	1041.7	1040.1	1038.5	1037.0	1034.8	1032.1	1029.4	1026.6	1023.9	1025.7
12.5°	1031.1	1029.7	1028.2	1026.8	1025.4	1023.4	1020.6	1017.9	1015.2	1012.5	1013.8
15°	1010.6	1009.3	1007.9	1006.6	1005.2	1003.0	1000.1	997.1	994.2	991.2	992.2
17.5°	984.5	983.1	981.8	980.4	979.1	976.9	973.9	970.9	967.9	964.9	966.0
20°	965.7	964.4	963.0	961.6	960.3	958.0	954.8	951.7	948.5	945.3	946.0
22.5°	946.9	945.0	943.1	941.2	939.3	936.9	933.9	930.9	927.9	924.9	925.0
25°	914.7	912.9	911.1	909.2	907.4	904.6	900.7	896.9	893.0	889.2	889.6
27.5°	877.9	876.3	874.7	873.0	871.4	869.1	866.0	863.0	859.9	856.9	856.2
30°	853.4	851.6	849.8	848.0	846.2	843.6	840.2	836.8	833.4	830.0	829.3
32.5°	827.3	825.8	824.4	822.9	821.5	819.0	815.4	811.8	808.2	804.6	803.4
35°	789.1	786.9	784.6	782.3	780.0	777.1	773.5	769.8	766.2	762.6	761.2
37.5°	746.0	744.0	742.0	740.0	738.1	735.2	731.6	728.0	724.4	720.7	719.0
40°	716.6	714.8	713.0	711.2	709.4	706.7	703.0	699.4	695.8	692.1	690.1
42.5°	688.1	686.2	684.4	682.6	680.8	678.1	674.4	670.8	667.2	663.6	661.3
45°	642.1	640.5	638.9	637.4	635.8	633.3	629.9	626.5	623.1	619.7	617.2
47.5°	596.4	594.9	593.4	591.9	590.4	587.9	584.3	580.8	577.3	573.7	571.1
50°	564.5	563.4	562.3	561.1	560.0	557.8	554.7	551.5	548.3	545.1	542.0
52.5°	533.5	532.0	530.5	529.0	527.5	525.3	522.3	519.3	516.3	513.3	510.7
55°	485.9	484.6	483.2	481.8	480.5	478.4	475.7	473.0	470.3	467.6	464.8
57.5°	438.1	437.1	436.0	434.9	433.8	431.8	428.8	425.8	422.8	419.8	417.1
60°	406.3	405.4	404.5	403.6	402.7	400.6	397.5	394.3	391.1	387.9	385.4
62.5°	375.3	373.8	372.4	370.9	369.5	367.5	365.1	362.6	360.2	357.7	355.4
65°	327.7	326.3	325.0	323.6	322.2	320.4	318.2	315.9	313.6	311.4	309.3
67.5°	279.3	278.2	277.1	276.0	274.9	273.4	271.3	269.3	267.3	265.2	263.6
70°	249.1	248.2	247.3	246.4	245.5	244.0	241.9	239.9	237.9	235.8	234.2
72.5°	218.1	217.1	216.2	215.3	214.4	213.3	212.0	210.7	209.4	208.0	206.5
75°	171.5	171.0	170.6	170.1	169.7	168.9	167.8	166.6	165.5	164.4	163.0
77.5°	129.9	129.1	128.3	127.5	126.8	126.2	125.7	125.2	124.8	124.3	123.7
80°	102.1	101.9	101.6	101.4	101.2	100.8	100.4	99.9	99.5	99.0	98.3
82.5°	76.0	75.9	75.9	75.8	75.8	75.6	75.3	75.1	74.8	74.5	73.7
85°	41.9	41.6	41.4	41.2	40.9	40.7	40.5	40.3	40.0	39.8	39.1
87.5°	14.9	15.0	15.2	15.2	15.1	15.2	15.6	16.4	17.0	16.7	16.0
90°	0.8	3.1	6.3	7.8	9.4	11.7	15.6	21.1	25.8	26.6	25.8
92.5°	9.5	13.8	19.4	22.8	28.1	35.5	53.2	78.0	100.2	101.6	85.8
95°	27.4	30.5	38.3	45.3	57.8	76.6	112.6	180.6	271.3	306.4	268.1
97.5°	44.6	48.8	57.1	67.7	82.1	103.3	148.5	243.3	394.0	523.1	548.8
100°	60.2	62.5	69.6	82.1	97.7	119.6	161.0	256.4	425.2	617.5	730.1
102.5°	74.6	76.3	83.3	95.8	112.1	134.0	172.3	257.0	413.4	620.7	797.6
105°	95.4	98.5	104.0	115.7	132.9	154.8	191.5	261.1	390.1	579.2	787.2
107.5°	117.9	120.4	125.7	136.5	153.5	175.6	211.2	271.9	378.5	534.8	718.5
110°	132.9	136.0	140.7	150.9	167.3	190.0	224.3	280.6	376.0	513.6	675.4

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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	146.6	149.8	155.1	164.6	180.4	203.7	236.9	290.0	376.6	499.8	645.4
115°	168.1	172.0	176.7	186.0	201.7	222.8	256.4	304.1	379.9	484.7	608.2
117.5°	190.3	193.4	198.1	206.4	221.4	243.3	274.4	319.1	385.5	477.3	584.7
120°	204.0	207.2	211.8	218.9	234.5	256.4	286.9	329.1	389.3	472.9	572.2
122.5°	217.2	219.7	224.3	232.0	247.6	270.2	298.8	337.9	393.7	470.4	561.6
125°	234.5	236.9	241.5	250.9	266.6	288.4	316.6	351.8	400.2	465.9	546.4
127.5°	248.3	251.4	258.0	268.3	283.3	305.8	333.2	364.7	407.0	463.2	532.3
130°	256.4	259.5	267.3	278.3	293.9	315.8	343.2	372.9	412.0	462.0	523.0
132.5°	263.9	267.7	276.1	287.7	303.9	325.8	351.9	381.0	417.0	461.4	515.5
135°	275.2	278.3	287.7	299.4	317.4	339.3	364.3	391.6	422.9	460.4	505.0
137.5°	285.8	289.5	298.9	311.4	329.3	349.6	374.3	399.8	428.2	460.3	497.6
140°	293.9	297.0	306.4	318.9	336.1	356.5	379.9	404.1	430.7	459.6	493.3
142.5°	302.0	304.6	313.3	325.8	342.4	361.5	384.3	407.9	432.6	459.6	488.9
145°	314.2	317.4	325.2	336.9	352.5	369.7	390.9	412.7	434.6	458.1	483.1
147.5°	327.4	329.7	337.2	348.0	361.0	376.3	396.2	415.4	435.3	455.3	477.2
150°	336.1	338.5	344.7	354.9	366.6	380.7	398.7	416.6	434.6	453.4	472.1
152.5°	344.9	346.0	352.2	361.1	372.2	385.1	401.2	417.3	433.4	450.3	467.8
155°	357.2	358.0	362.7	371.3	379.9	391.6	404.9	418.2	431.5	444.8	459.6
157.5°	367.6	368.3	372.1	379.6	386.5	396.3	407.6	418.2	427.9	439.2	452.0
160°	374.4	375.2	378.3	384.6	390.9	399.4	408.8	418.2	426.0	435.4	446.4
162.5°	381.3	380.8	384.0	389.0	394.6	401.3	409.5	417.6	424.2	432.3	441.3
165°	389.3	388.5	390.1	394.8	398.7	403.4	410.4	415.9	420.6	426.0	433.1
167.5°	395.9	394.9	396.3	399.3	402.1	405.1	410.2	414.8	417.0	420.6	424.9
170°	400.2	398.7	399.4	401.8	403.4	405.7	409.6	413.5	415.1	417.4	420.6
172.5°	402.7	401.8	401.3	403.7	404.6	406.3	409.0	411.6	412.6	413.7	416.2
175°	405.7	404.9	404.1	405.7	405.7	406.5	408.0	409.6	408.8	409.6	410.4
177.5°	407.1	405.9	405.2	406.5	406.5	406.5	407.1	408.4	407.1	406.5	407.1
180°	406.5	406.5	406.5	406.5	406.5	406.5	406.5	406.5	406.5	406.5	406.5

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1061.7	1061.7	1061.7	1061.7	1061.7	1061.7	1061.7	1061.7
2.5°	1057.1	1059.0	1060.8	1061.5	1061.1	1060.8	1060.4	1060.1
5°	1050.0	1051.8	1053.6	1054.3	1053.9	1053.4	1053.0	1052.5
7.5°	1038.2	1040.0	1041.8	1042.4	1041.9	1041.5	1041.0	1040.5
10°	1027.5	1029.4	1031.2	1031.7	1031.1	1030.4	1029.7	1029.0
12.5°	1015.0	1016.3	1017.6	1017.9	1017.4	1017.0	1016.5	1016.0
15°	993.1	994.0	994.9	994.8	993.6	992.5	991.4	990.2
17.5°	967.0	968.0	969.1	969.1	968.0	966.9	965.8	964.7
20°	946.7	947.4	948.0	947.9	947.0	946.1	945.2	944.3
22.5°	925.2	925.3	925.4	925.2	924.7	924.1	923.6	923.1
25°	890.1	890.5	891.0	891.0	890.5	890.1	889.6	889.2
27.5°	855.5	854.9	854.2	853.3	852.2	851.1	850.0	848.9
30°	828.6	827.9	827.2	826.4	825.5	824.6	823.7	822.8
32.5°	802.2	801.0	799.7	798.7	797.8	796.9	795.9	795.0
35°	759.9	758.5	757.1	755.9	754.8	753.6	752.5	751.3
37.5°	717.4	715.7	714.0	712.6	711.5	710.4	709.4	708.3
40°	688.1	686.0	684.0	682.5	681.6	680.7	679.8	678.9
42.5°	659.1	656.9	654.7	652.9	651.6	650.4	649.1	647.8
45°	614.7	612.2	609.7	608.0	607.1	606.2	605.3	604.3
47.5°	568.5	565.8	563.2	561.2	559.9	558.6	557.3	556.0
50°	538.8	535.6	532.4	530.3	529.1	528.0	526.9	525.7
52.5°	508.0	505.4	502.8	500.7	499.2	497.7	496.2	494.7
55°	462.1	459.4	456.7	454.7	453.6	452.5	451.3	450.2
57.5°	414.4	411.7	409.1	407.3	406.4	405.6	404.7	403.8
60°	382.9	380.4	377.9	376.4	375.7	375.0	374.3	373.6
62.5°	353.1	350.8	348.5	346.9	346.0	345.1	344.3	343.4
65°	307.3	305.2	303.2	301.6	300.5	299.3	298.2	297.1
67.5°	262.0	260.5	258.9	257.6	256.7	255.8	254.9	254.0
70°	232.6	231.1	229.5	228.2	227.3	226.4	225.5	224.6
72.5°	204.9	203.3	201.7	200.5	199.8	199.1	198.4	197.6
75°	161.6	160.3	158.9	158.5	158.9	159.4	159.8	160.3
77.5°	123.0	122.3	121.6	121.0	120.3	119.7	119.1	118.4
80°	97.7	97.0	96.3	95.7	95.3	94.8	94.4	93.9
82.5°	72.8	71.9	71.1	70.6	70.5	70.4	70.3	70.2
85°	38.5	37.8	37.1	36.6	36.4	36.2	36.0	35.7
87.5°	15.3	14.5	14.3	14.1	13.9	13.7	13.5	13.3
90°	25.0	23.5	25.0	25.8	25.8	25.8	25.8	25.8
92.5°	68.2	58.5	51.9	47.1	46.4	43.9	44.6	43.3
95°	204.8	157.1	124.3	107.1	96.9	90.7	88.3	89.1
97.5°	477.9	391.0	306.4	250.0	212.6	193.4	182.0	175.4
100°	713.7	616.8	509.7	415.1	350.2	316.6	293.9	279.8
102.5°	868.2	846.3	767.9	667.7	597.2	539.8	511.5	492.5
105°	949.8	1038.1	1048.3	1022.5	974.0	925.5	891.9	881.0
107.5°	891.0	1024.0	1105.3	1143.2	1149.3	1146.6	1139.9	1125.3
110°	840.3	980.3	1080.3	1144.4	1178.0	1192.9	1199.9	1199.1

TEST NUMBER: P331356

CATALOG NUMBER: SA2XXDIP-C675D725U835-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	794.1	928.3	1035.3	1108.8	1155.5	1180.4	1193.7	1197.9
115°	737.1	857.5	959.9	1040.4	1095.9	1131.9	1152.2	1159.3
117.5°	694.3	800.0	892.9	968.4	1025.0	1063.0	1084.4	1090.3
120°	673.0	770.0	852.8	924.0	978.7	1015.4	1038.1	1045.9
122.5°	656.2	745.0	823.4	887.7	936.8	972.9	993.1	999.6
125°	631.6	712.1	780.9	839.5	884.9	914.6	934.1	940.4
127.5°	607.4	680.2	745.1	799.2	838.8	866.6	883.5	888.5
130°	591.7	659.0	720.7	772.3	810.6	837.2	852.8	859.1
132.5°	576.7	639.0	695.7	744.2	781.9	808.4	822.8	828.4
135°	555.8	607.4	659.0	702.7	736.4	762.2	776.2	779.4
137.5°	539.1	582.2	623.2	661.3	692.0	714.2	726.5	731.2
140°	528.4	566.0	601.9	636.3	661.3	681.6	693.4	698.1
142.5°	519.7	551.6	582.5	611.3	635.1	653.5	664.0	664.9
145°	507.3	533.1	557.4	580.0	598.8	612.1	619.9	622.2
147.5°	497.8	518.1	537.0	553.6	569.1	579.7	585.0	586.4
150°	490.9	508.1	524.5	538.6	550.3	559.7	564.4	565.2
152.5°	484.0	500.0	513.9	526.1	535.3	543.4	546.9	547.0
155°	474.5	487.0	498.7	507.3	515.9	521.4	524.5	523.0
157.5°	463.4	473.9	483.7	490.4	496.5	501.1	502.5	502.5
160°	456.5	465.1	473.7	479.2	484.7	488.6	489.3	489.3
162.5°	449.6	457.0	464.3	468.6	474.0	476.7	477.5	476.8
165°	439.3	444.8	450.3	453.4	456.5	459.6	459.6	458.9
167.5°	429.5	433.7	437.4	440.3	441.7	443.4	443.2	442.3
170°	424.5	426.8	429.9	431.5	432.3	434.6	433.8	432.3
172.5°	418.8	420.6	423.1	424.0	424.8	425.9	425.1	424.2
175°	412.7	413.5	414.3	415.1	415.1	415.9	415.1	413.5
177.5°	408.4	408.4	409.0	409.0	409.0	409.0	408.4	407.1
180°	406.5	406.5	406.5	406.5	406.5	406.5	406.5	406.5

(END OF REPORT)