

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: P331362-840

Luminaire Tested: **SA2XXDIP-C675D925U840-4F0-1E-UDD-D4**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331362-840
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-C675D925U840-4F0-1E-UDD-D4
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 675 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 925 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

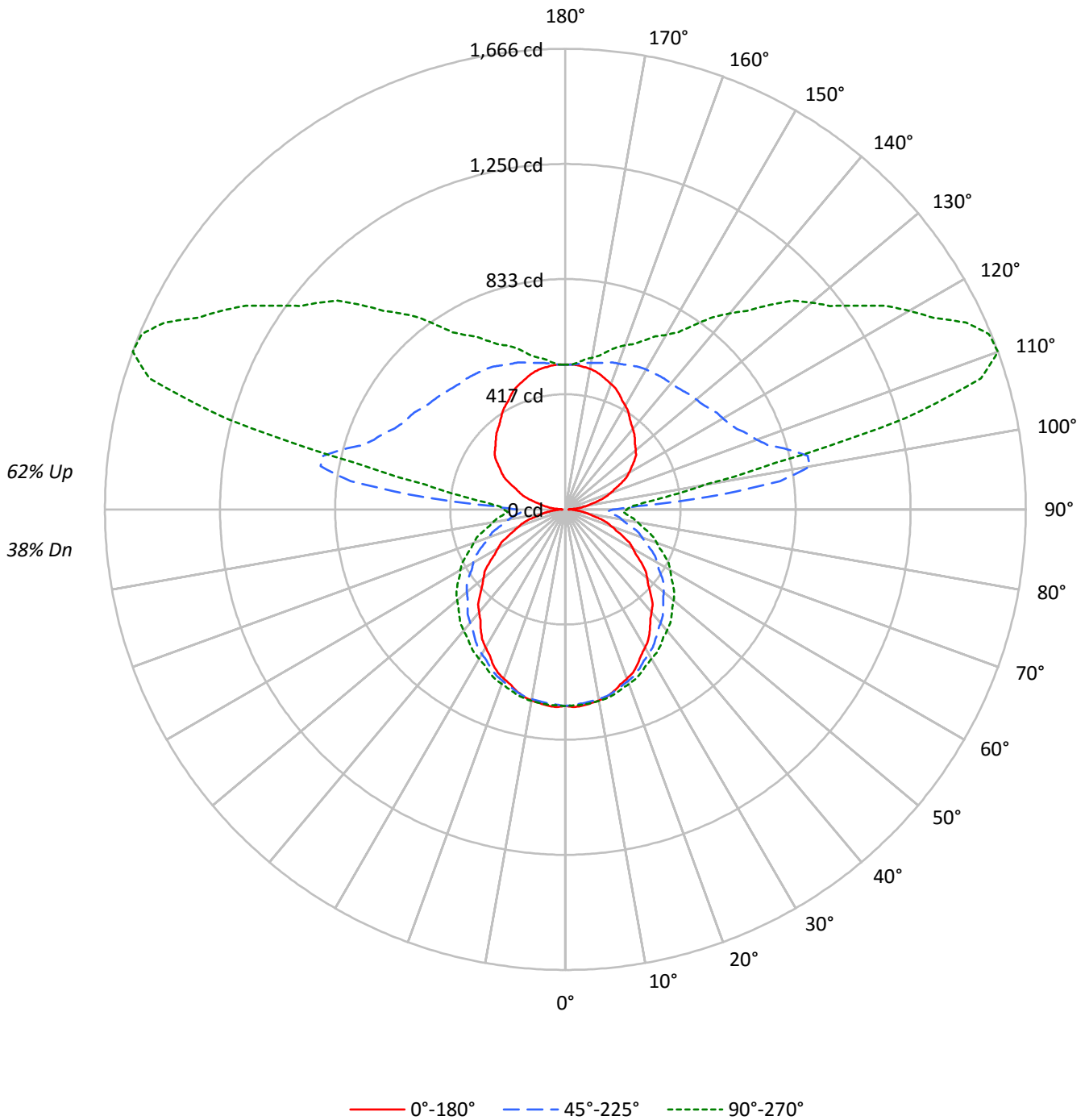
Lumens per Lamp: N/A
Luminaire Lumens: 6365.5 lumens
Efficiency: N/A
Efficacy: 122.4 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: Semi-Indirect

Input Watts (W): 52
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: P331362-840
CATALOG NUMBER: SA2XXDIP-C675D925U840-4F0-1E-UDD-D4

Luminous Intensity Polar Plot





TEST NUMBER: P331362-840

CATALOG NUMBER: SA2XXDIP-C675D925U840-4F0-1E-UDD-D4

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	104	104	104	104	95	95	95	95	77	77	77	60	60	60	45	45	45	38
1	94	89	85	81	85	81	77	74	65	63	60	51	49	48	38	37	36	30
2	85	77	71	65	77	70	64	60	57	53	49	44	41	39	33	31	29	24
3	77	67	60	54	70	61	55	49	50	45	41	39	35	32	29	26	24	20
4	70	59	51	45	63	54	47	41	44	38	34	34	30	27	25	23	21	17
5	64	53	44	38	58	48	41	35	39	33	29	31	27	23	23	20	18	14
6	59	47	39	33	53	43	36	30	35	29	25	27	23	20	20	18	15	12
7	55	42	34	29	49	39	31	26	31	26	22	25	21	18	19	16	14	11
8	51	38	30	25	46	35	28	23	29	23	19	23	19	16	17	14	12	10
9	47	35	27	22	43	32	25	21	26	21	17	21	17	14	16	13	11	9
10	44	32	25	20	40	29	23	18	24	19	15	19	15	13	15	12	10	8

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11485	11485	11485
5°	11541	11055	11013
10°	11469	10729	10608
15°	11310	10384	10181
20°	11112	10013	9772
25°	10913	9655	9399
30°	10635	9288	9023
35°	10355	8933	8760
40°	10057	8630	8496
45°	9777	8361	8270
50°	9476	8116	8048
55°	9160	7855	7822
60°	8770	7583	7583
65°	8367	7262	7299
70°	7917	6920	6990
75°	7339	6581	6708
80°	6436	6238	6424
85°	5566	5939	6199



TEST NUMBER: P331362-840

CATALOG NUMBER: SA2XXDIP-C675D925U840-4F0-1E-UDD-D4

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	67.4	1.1
10°-20°	193.3	3.0
20°-30°	292.9	4.6
30°-40°	356.7	5.6
40°-50°	383.8	6.0
50°-60°	372.7	5.9
60°-70°	325.4	5.1
70°-80°	250.5	3.9
80°-90°	172.9	2.7
90°-100°	325.4	5.1
100°-110°	795.7	12.5
110°-120°	811.3	12.7
120°-130°	653.1	10.3
130°-140°	512.5	8.1
140°-150°	379.7	6.0
150°-160°	265.2	4.2
160°-170°	156.1	2.5
170°-180°	50.8	0.8
0°-30°	553.6	8.7
0°-40°	910.3	14.3
0°-60°	1666.8	26.2
0°-90°	2415.7	37.9
90°-120°	1932.4	30.4
90°-150°	3477.7	54.6
90°-180°	3950.0	62.1
0°-180°	6365.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	711	711	711	711	711	
5°	713	710	704	710	709	68
15°	680	682	682	691	691	192
25°	618	626	635	647	651	284
35°	533	551	570	592	600	333
45°	437	465	501	532	543	337
55°	335	373	426	462	476	299
65°	229	280	340	381	396	227
75°	127	185	250	293	308	134
85°	37	101	167	209	225	40
90°	11	84	170	208	223	9
95°	44	144	514	305	285	44
105°	128	222	836	1458	1272	137
115°	221	291	687	1381	1599	219
125°	304	362	636	1106	1285	271
135°	356	425	605	910	1046	275
145°	405	466	591	739	814	254
155°	461	497	574	649	674	212
165°	502	517	549	583	592	141
175°	523	524	528	535	533	50
180°	524	524	524	524	524	



TEST NUMBER: P331362-840

CATALOG NUMBER: SA2XXDIP-C675D925U840-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	711.3	711.3	711.3	711.3	711.3	711.3	711.3	711.3	711.3	711.3	711.3
2.5°	715.5	714.9	714.4	713.8	713.3	712.4	711.0	709.7	708.5	707.2	708.1
5°	713.4	712.7	712.1	711.3	710.6	709.6	708.2	706.9	705.5	704.1	705.5
7.5°	707.0	706.5	706.1	705.6	705.2	704.4	703.4	702.3	701.3	700.2	701.9
10°	702.1	701.6	701.1	700.6	700.2	699.6	698.9	698.3	697.6	696.9	698.7
12.5°	693.8	693.9	694.0	694.1	694.2	694.0	693.5	693.0	692.5	692.0	693.8
15°	680.4	680.9	681.4	681.8	682.3	682.5	682.5	682.5	682.5	682.5	684.5
17.5°	663.1	664.1	665.0	666.0	666.9	667.8	668.5	669.2	669.9	670.8	672.9
20°	651.6	652.7	653.8	655.0	656.1	657.1	658.0	659.0	659.9	660.9	663.4
22.5°	639.1	640.5	641.9	643.2	644.5	645.8	647.1	648.3	649.6	651.0	653.5
25°	618.5	620.2	621.8	623.4	625.0	626.8	628.8	631.0	633.0	635.0	637.8
27.5°	593.8	596.4	599.1	601.7	604.3	606.8	609.3	611.7	614.1	616.5	620.0
30°	577.3	580.3	583.3	586.2	589.3	592.2	595.2	598.1	601.2	604.1	607.7
32.5°	559.2	562.5	565.8	569.2	572.6	576.0	579.6	583.0	586.5	590.1	594.3
35°	533.0	536.8	540.8	544.6	548.6	552.7	557.0	561.4	565.7	570.1	575.1
37.5°	504.5	509.1	513.5	518.0	522.5	527.6	533.2	538.9	544.4	550.1	555.7
40°	485.5	490.6	495.6	500.7	505.7	511.3	517.6	523.7	529.9	536.0	542.0
42.5°	467.5	472.4	477.5	482.5	487.6	493.6	500.8	507.9	514.9	522.1	528.6
45°	437.1	443.3	449.5	455.7	461.8	469.0	477.0	485.0	493.0	501.0	508.2
47.5°	407.2	413.9	420.7	427.4	434.1	442.2	451.6	461.0	470.4	479.8	487.3
50°	386.6	393.7	400.8	407.9	415.0	423.7	434.0	444.3	454.6	464.9	472.7
52.5°	366.8	374.3	381.7	389.2	396.7	405.9	416.7	427.6	438.4	449.3	457.3
55°	335.1	343.3	351.5	359.8	368.0	378.1	390.0	401.9	413.8	425.8	434.0
57.5°	303.7	313.1	322.3	331.6	340.9	351.6	363.8	375.9	388.1	400.2	409.1
60°	281.4	291.2	301.1	311.0	320.8	332.3	345.4	358.4	371.4	384.6	393.2
62.5°	261.7	271.9	282.1	292.3	302.6	314.2	327.2	340.2	353.4	366.4	375.7
65°	228.8	240.0	251.4	262.6	273.8	286.1	299.6	313.2	326.7	340.2	349.6
67.5°	198.7	210.5	222.3	234.0	245.7	258.4	272.3	286.1	299.9	313.8	323.3
70°	177.3	189.2	201.2	213.1	225.0	238.0	252.3	266.4	280.6	294.9	304.7
72.5°	157.5	169.8	182.1	194.4	206.6	219.9	234.4	248.7	263.2	277.5	287.2
75°	126.8	139.7	152.5	165.3	178.1	191.9	206.5	221.2	235.8	250.5	260.3
77.5°	97.1	110.6	124.0	137.3	150.8	165.0	179.9	194.8	209.6	224.5	234.4
80°	77.4	91.3	105.2	119.3	133.2	147.6	162.6	177.4	192.3	207.2	216.8
82.5°	60.8	74.6	88.4	102.2	116.0	130.4	145.5	160.6	175.6	190.8	200.4
85°	37.2	51.3	65.5	79.7	93.9	108.4	123.0	137.6	152.4	167.0	176.6
87.5°	20.4	34.6	49.1	63.2	77.3	92.0	107.7	123.7	139.7	154.5	163.6
90°	11.3	27.7	44.9	60.3	75.5	92.5	112.3	134.0	154.7	170.4	178.5
92.5°	21.8	39.6	59.2	76.0	95.2	118.0	154.8	201.1	243.8	259.6	248.3
95°	43.5	58.4	79.2	99.0	125.9	162.4	222.5	323.9	454.5	513.6	472.9
97.5°	64.6	79.7	100.0	123.2	151.4	190.2	261.6	397.0	604.5	784.2	825.7
100°	84.8	96.3	113.9	138.5	167.1	206.0	272.3	408.0	638.5	899.3	1052.9
102.5°	102.5	112.5	129.4	153.2	181.9	220.3	282.1	403.7	617.8	897.6	1134.1
105°	128.2	138.8	152.5	174.2	203.1	240.5	299.8	401.4	579.7	835.5	1111.6
107.5°	156.9	165.5	177.6	196.8	224.2	260.9	318.3	407.9	556.8	769.8	1014.3
110°	175.4	184.1	194.7	212.4	238.1	275.3	330.8	414.7	548.9	737.4	953.4



TEST NUMBER: P331362-840

CATALOG NUMBER: SA2XXDIP-C675D925U840-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	193.2	201.1	211.8	227.9	252.2	289.4	342.8	422.0	544.4	713.9	908.9
115°	220.9	228.3	236.9	251.6	274.3	307.9	361.5	433.3	541.4	686.7	852.8
117.5°	248.4	254.1	261.8	274.1	295.1	328.9	378.6	445.8	541.0	668.8	814.1
120°	266.1	271.0	278.0	288.0	309.1	342.3	390.8	454.4	541.2	658.2	792.6
122.5°	283.1	286.7	293.1	303.4	323.9	357.4	402.8	461.9	542.5	650.1	773.8
125°	304.5	307.4	313.5	325.6	345.8	377.6	421.2	473.9	543.7	635.7	745.8
127.5°	322.1	326.0	334.2	347.3	366.4	398.3	439.5	486.0	546.4	624.9	719.6
130°	332.6	336.5	346.3	360.2	380.1	410.6	450.7	493.8	549.1	618.3	702.5
132.5°	342.3	346.9	357.6	372.2	393.0	422.9	460.3	501.5	551.6	612.6	687.6
135°	355.8	359.8	371.9	387.1	410.2	439.6	474.1	511.7	554.3	605.0	667.2
137.5°	369.5	374.3	386.4	402.4	425.4	452.0	484.9	518.8	556.4	598.7	651.2
140°	380.0	383.7	395.7	411.5	433.5	459.8	490.5	522.2	556.9	594.7	641.7
142.5°	390.5	393.4	404.6	420.4	441.5	466.1	495.6	526.1	558.1	593.0	633.7
145°	405.2	409.2	419.3	434.4	454.5	476.8	503.9	532.2	560.4	590.6	624.2
147.5°	422.1	425.2	434.7	448.7	465.4	485.2	510.8	535.6	561.2	587.0	615.4
150°	433.4	436.4	444.4	457.6	472.7	490.8	514.0	537.1	560.4	584.6	608.7
152.5°	444.6	446.1	454.1	465.6	480.0	496.4	517.3	538.0	558.8	580.6	603.1
155°	460.6	461.6	467.7	478.8	489.8	504.9	522.1	539.2	556.3	573.5	592.6
157.5°	473.9	474.9	479.8	489.4	498.3	511.0	525.5	539.2	551.7	566.2	582.8
160°	482.8	483.8	487.8	495.8	503.9	515.0	527.1	539.2	549.3	561.4	575.5
162.5°	491.6	491.0	495.0	501.5	508.8	517.5	528.0	538.4	546.8	557.3	569.1
165°	501.9	500.9	502.9	509.0	514.0	520.1	529.2	536.2	542.2	549.3	558.4
167.5°	510.4	509.2	511.0	514.8	518.5	522.3	529.0	534.8	537.6	542.2	547.9
170°	516.0	514.0	515.0	518.1	520.1	523.1	528.2	533.2	535.2	538.2	542.2
172.5°	519.3	518.1	517.5	520.5	521.7	523.9	527.4	530.8	532.0	533.4	536.6
175°	523.1	522.1	521.1	523.1	523.1	524.1	526.1	528.2	527.1	528.2	529.2
177.5°	524.9	523.3	522.5	524.1	524.1	524.1	524.9	526.5	524.9	524.1	524.9
180°	524.1	524.1	524.1	524.1	524.1	524.1	524.1	524.1	524.1	524.1	524.1



TEST NUMBER: P331362-840

CATALOG NUMBER: SA2XXDIP-C675D925U840-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	711.3	711.3	711.3	711.3	711.3	711.3	711.3	711.3
2.5°	709.0	709.9	710.8	711.1	710.7	710.4	710.0	709.7
5°	706.9	708.2	709.6	710.2	709.9	709.7	709.5	709.2
7.5°	703.5	705.2	706.8	707.5	707.3	707.0	706.8	706.6
10°	700.5	702.4	704.3	705.0	704.8	704.6	704.4	704.1
12.5°	695.6	697.4	699.3	700.0	699.8	699.6	699.4	699.1
15°	686.6	688.6	690.7	691.7	691.5	691.2	690.9	690.7
17.5°	675.0	677.2	679.3	680.4	680.4	680.4	680.4	680.4
20°	665.9	668.4	670.9	672.2	672.2	672.2	672.2	672.2
22.5°	656.0	658.5	661.0	662.5	662.8	663.2	663.6	663.9
25°	640.6	643.3	646.0	647.7	648.4	649.1	649.8	650.6
27.5°	623.5	626.9	630.5	632.4	632.9	633.4	633.9	634.4
30°	611.5	615.1	618.7	621.0	621.7	622.4	623.0	623.7
32.5°	598.5	602.8	606.9	609.7	611.0	612.2	613.4	614.6
35°	580.2	585.2	590.3	593.6	595.2	596.8	598.3	600.0
37.5°	561.3	566.8	572.5	576.1	577.8	579.5	581.2	582.9
40°	548.0	553.9	559.9	563.9	565.9	568.0	570.1	572.2
42.5°	535.0	541.6	548.1	552.4	554.4	556.5	558.6	560.6
45°	515.2	522.3	529.5	534.1	536.4	538.8	541.0	543.3
47.5°	494.6	502.1	509.5	514.4	516.9	519.5	522.0	524.5
50°	480.5	488.3	496.1	501.3	503.8	506.3	508.8	511.3
52.5°	465.2	473.2	481.2	486.6	489.2	491.9	494.6	497.4
55°	442.2	450.5	458.8	464.3	467.4	470.3	473.3	476.3
57.5°	418.0	426.9	435.8	441.7	444.7	447.8	450.8	453.8
60°	401.9	410.6	419.4	425.4	428.5	431.7	434.9	438.2
62.5°	384.9	394.2	403.4	409.6	412.5	415.6	418.6	421.6
65°	359.0	368.4	377.8	384.0	387.0	389.9	392.9	395.9
67.5°	332.8	342.2	351.7	358.1	361.1	364.3	367.4	370.5
70°	314.6	324.4	334.3	340.5	343.3	346.1	348.8	351.5
72.5°	296.9	306.5	316.2	322.7	326.0	329.3	332.5	335.9
75°	270.2	280.0	289.9	296.3	299.3	302.3	305.3	308.2
77.5°	244.2	254.0	263.8	270.2	273.5	276.7	279.8	283.1
80°	226.4	236.1	245.7	252.2	255.3	258.5	261.8	265.0
82.5°	210.0	219.5	229.2	235.5	238.5	241.6	244.6	247.6
85°	186.2	195.9	205.5	211.9	215.1	218.3	221.6	224.7
87.5°	172.8	181.7	191.5	197.8	200.8	203.7	206.6	209.5
90°	186.6	193.8	205.0	212.0	214.7	217.4	220.2	223.0
92.5°	234.5	231.0	231.5	231.2	233.1	232.6	236.1	237.3
95°	400.0	347.3	313.7	297.2	286.8	281.6	281.2	285.0
97.5°	742.9	639.2	538.7	471.5	426.1	403.9	391.9	386.2
100°	1040.3	923.7	794.2	677.7	596.5	555.7	529.0	513.4
102.5°	1233.2	1213.4	1120.6	996.8	908.5	837.0	803.0	780.9
105°	1329.3	1451.2	1472.3	1444.3	1384.3	1324.3	1283.5	1271.9
107.5°	1244.4	1423.6	1536.1	1590.0	1600.4	1599.5	1593.4	1577.1
110°	1173.4	1361.1	1497.4	1585.0	1630.9	1652.5	1664.2	1665.7



TEST NUMBER: P331362-840

CATALOG NUMBER: SA2XXDIP-C675D925U840-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	1107.9	1288.4	1433.6	1533.3	1596.1	1630.6	1650.3	1658.3
115°	1026.0	1188.1	1327.1	1435.5	1509.6	1558.5	1587.2	1598.8
117.5°	962.2	1105.2	1231.7	1333.6	1409.0	1460.3	1490.3	1500.3
120°	929.1	1060.5	1173.7	1269.9	1342.9	1392.8	1424.6	1437.2
122.5°	902.0	1022.7	1130.1	1217.2	1282.6	1331.3	1359.5	1370.1
125°	861.8	971.8	1066.6	1146.4	1206.9	1247.3	1274.6	1284.6
127.5°	822.1	921.7	1011.1	1084.7	1137.7	1175.6	1199.3	1207.8
130°	796.7	888.8	973.9	1044.1	1095.3	1131.5	1153.5	1163.4
132.5°	771.9	857.5	936.0	1002.1	1052.5	1088.5	1108.9	1118.0
135°	737.6	808.9	880.2	940.0	985.1	1020.3	1040.3	1046.1
137.5°	708.8	768.7	825.7	877.8	918.9	949.0	966.5	974.1
140°	690.7	742.8	792.7	839.7	873.2	900.9	917.4	924.7
142.5°	676.3	720.3	763.3	802.3	834.1	859.2	873.8	876.3
145°	656.8	691.5	724.1	754.6	779.9	798.2	809.4	813.6
147.5°	642.2	668.5	693.2	714.9	735.4	749.6	757.0	759.4
150°	633.0	655.1	676.3	694.4	709.5	721.6	727.7	728.7
152.5°	624.1	644.6	662.6	678.3	690.1	700.6	705.1	705.3
155°	611.8	627.9	643.0	654.1	665.2	672.3	676.3	674.3
157.5°	597.4	611.0	623.7	632.4	640.2	646.0	647.8	647.8
160°	588.5	599.7	610.8	617.8	624.9	630.0	631.0	631.0
162.5°	579.8	589.2	598.6	604.1	611.2	614.6	615.6	614.8
165°	566.4	573.5	580.6	584.6	588.5	592.6	592.6	591.6
167.5°	553.7	559.2	564.0	567.6	569.5	571.7	571.5	570.3
170°	547.2	550.3	554.3	556.3	557.3	560.4	559.4	557.3
172.5°	540.0	542.2	545.4	546.6	547.6	549.1	548.1	546.8
175°	532.2	533.2	534.2	535.2	535.2	536.2	535.2	533.2
177.5°	526.5	526.5	527.4	527.4	527.4	527.4	526.5	524.9
180°	524.1	524.1	524.1	524.1	524.1	524.1	524.1	524.1

(END OF REPORT)