

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: P331344-840

Luminaire Tested: **SA2XXDIP-C675D530U840-4F0-1E-UDD-D4**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331344-840
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-C675D530U840-4F0-1E-UDD-D4
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 675 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 530 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4800.5 lumens
Efficiency: N/A
Efficacy: 119.1 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: General Diffuse

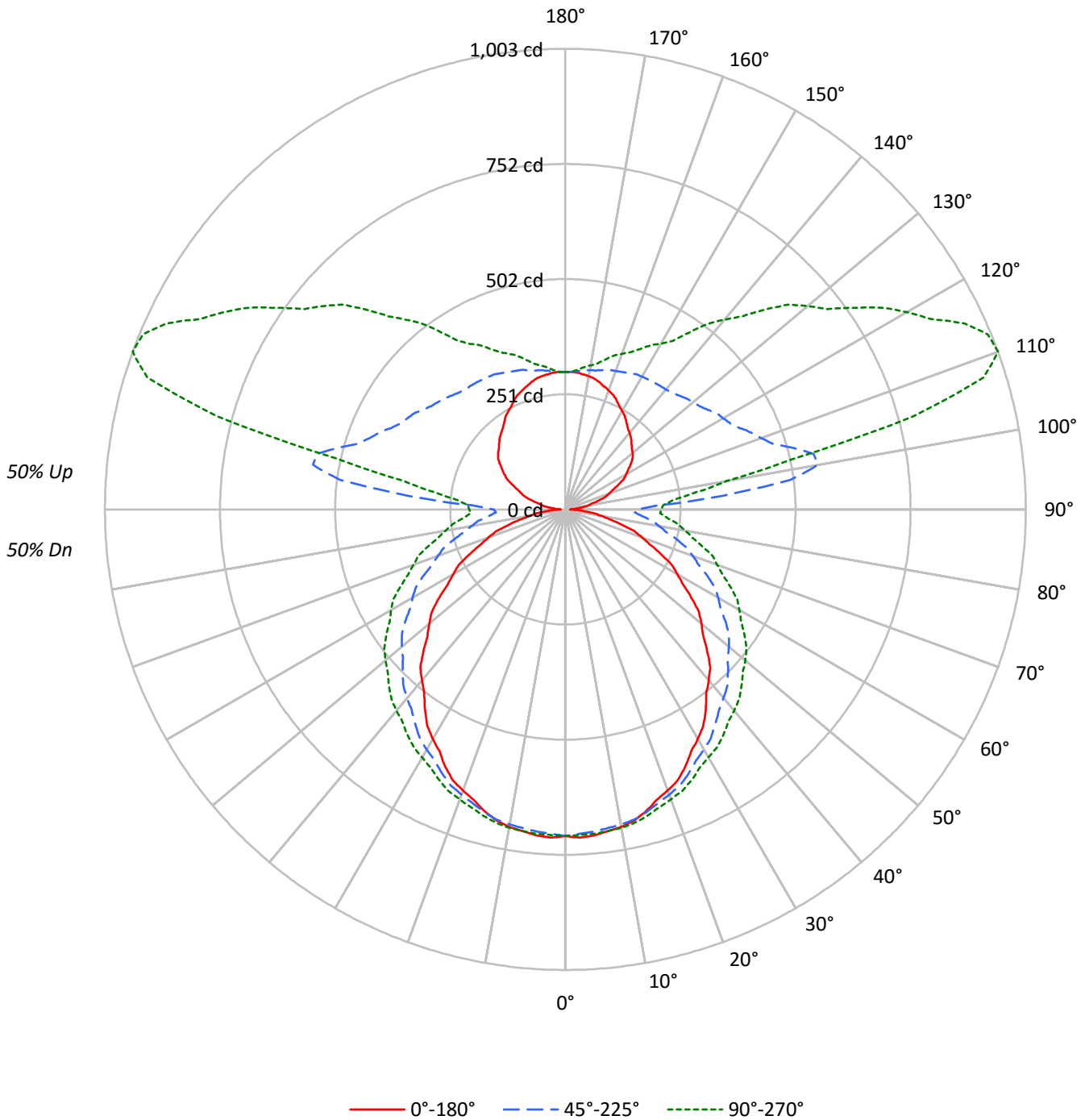
Input Watts (W): 40.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P331344-840

CATALOG NUMBER: SA2XXDIP-C675D530U840-4F0-1E-UDD-D4

Luminous Intensity Polar Plot





TEST NUMBER: P331344-840

CATALOG NUMBER: SA2XXDIP-C675D530U840-4F0-1E-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	50	30	10	0	
RCR																						
0	107	107	107	107	99	99	99	99	83	83	83	69	69	69	56	56	56	50				
1	96	91	87	83	89	84	80	77	71	68	65	59	57	55	47	46	45	39				
2	87	79	72	66	80	73	67	62	61	57	53	51	47	44	41	38	36	32				
3	79	69	61	55	72	64	57	51	54	48	44	44	40	37	36	33	30	26				
4	72	61	52	46	66	56	49	43	47	41	37	39	35	31	32	28	26	22				
5	66	54	45	39	60	50	42	36	42	36	32	35	30	27	28	25	22	19				
6	61	48	40	34	56	45	37	31	38	32	27	31	27	23	26	22	19	16				
7	56	43	35	29	51	40	33	27	34	28	24	29	24	20	23	20	17	14				
8	52	39	31	26	48	36	29	24	31	25	21	26	21	18	21	18	15	13				
9	48	36	28	23	44	33	26	21	28	23	19	24	19	16	20	16	14	11				
10	45	33	25	20	42	30	24	19	26	21	17	22	18	15	18	15	12	10				

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: P331344-840

CATALOG NUMBER: SA2XXDIP-C675D530U840-4F0-1E-UDD-D4

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	67.4	1.4
10°-20°	193.3	4.0
20°-30°	292.9	6.1
30°-40°	356.7	7.4
40°-50°	383.8	8.0
50°-60°	372.7	7.8
60°-70°	325.4	6.8
70°-80°	250.5	5.2
80°-90°	170.8	3.6
90°-100°	235.6	4.9
100°-110°	490.9	10.2
110°-120°	487.5	10.2
120°-130°	386.5	8.1
130°-140°	298.4	6.2
140°-150°	217.9	4.5
150°-160°	151.6	3.2
160°-170°	89.2	1.9
170°-180°	29.0	0.6
0°-30°	553.6	11.5
0°-40°	910.3	19.0
0°-60°	1666.8	34.7
0°-90°	2413.7	50.3
90°-120°	1214.1	25.3
90°-150°	2117.0	44.1
90°-180°	2387.0	49.7
0°-180°	4800.5	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	78	156	194	209	8
95°	28	107	344	242	236	28
105°	75	142	515	886	785	81
115°	128	174	419	829	958	126
125°	175	208	378	659	765	156
135°	204	244	350	534	615	158
145°	232	266	338	425	470	145
155°	263	284	328	371	385	121
165°	287	295	314	333	338	81
175°	299	299	302	306	305	28
180°	299	299	299	299	299	



TEST NUMBER: P331344-840

CATALOG NUMBER: SA2XXDIP-C675D530U840-4F0-1E-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°	20.3	34.3	48.5	62.3	76.2	90.7	105.9	121.4	136.7	151.6	160.8
90°	10.9	25.9	41.5	55.9	70.4	86.0	103.6	122.3	140.5	155.6	164.2
92.5°	16.5	32.0	48.5	63.4	79.7	98.4	125.5	157.9	188.3	203.5	200.9
95°	28.4	41.5	58.0	73.9	93.9	120.0	160.3	224.1	304.7	344.4	324.8
97.5°	40.1	52.7	68.4	85.8	106.0	133.0	179.6	262.6	386.8	495.1	522.5
100°	51.6	61.8	75.4	93.1	113.1	139.9	183.3	266.3	403.5	558.1	649.4
102.5°	61.3	70.4	83.3	100.2	120.0	146.2	186.8	261.8	389.4	554.6	693.3
105°	75.4	84.3	95.0	110.3	129.7	155.0	194.0	257.2	364.2	515.4	676.6
107.5°	91.8	99.0	108.2	121.5	139.4	163.9	201.6	257.7	347.7	474.2	617.3
110°	102.0	109.0	116.9	129.1	145.7	170.3	206.8	259.5	341.0	453.6	580.2



TEST NUMBER: P331344-840

CATALOG NUMBER: SA2XXDIP-C675D530U840-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	112.2	118.4	126.1	136.9	152.5	176.8	212.0	261.8	336.3	437.7	552.3
115°	127.9	133.3	139.4	148.8	162.8	184.7	219.8	265.3	331.4	418.9	516.7
117.5°	143.3	147.2	152.3	160.1	172.8	194.5	226.9	269.4	327.9	405.1	491.0
120°	153.4	156.6	161.0	167.1	179.6	200.7	232.4	272.6	326.1	396.9	476.5
122.5°	163.1	165.3	169.2	175.1	187.0	208.1	237.8	275.2	324.9	390.1	463.4
125°	174.8	176.5	180.1	186.9	198.4	218.2	246.3	279.5	322.6	378.3	443.8
127.5°	185.0	187.0	191.7	199.0	209.8	229.2	255.4	284.5	321.5	368.9	425.6
130°	191.0	193.1	198.5	206.4	217.7	236.1	261.1	287.8	321.3	363.0	413.4
132.5°	196.5	199.0	205.0	213.3	225.1	243.0	265.9	291.0	321.2	357.6	402.8
135°	203.8	206.0	213.0	221.6	234.9	252.2	272.9	295.3	320.6	350.5	388.2
137.5°	211.6	214.3	221.2	230.4	243.4	258.8	278.1	297.9	319.8	344.5	376.2
140°	217.5	219.6	226.3	235.3	247.7	262.9	280.5	298.9	318.9	340.7	369.1
142.5°	223.6	225.2	231.4	240.3	252.4	266.3	283.3	300.7	319.0	339.0	363.6
145°	231.6	233.8	239.5	248.2	259.7	272.4	287.9	304.1	320.2	337.5	357.3
147.5°	241.2	242.9	248.4	256.4	266.0	277.2	291.9	306.1	320.6	335.4	351.7
150°	247.6	249.3	254.0	261.5	270.1	280.4	293.7	307.0	320.2	334.1	347.9
152.5°	254.1	254.9	259.5	266.1	274.3	283.7	295.6	307.4	319.3	331.7	344.7
155°	263.2	263.8	267.2	273.6	279.9	288.5	298.3	308.1	317.9	327.7	338.6
157.5°	270.7	271.4	274.2	279.6	284.8	292.0	300.2	308.1	315.3	323.6	333.0
160°	275.9	276.4	278.7	283.4	287.9	294.3	301.2	308.1	313.9	320.8	328.8
162.5°	280.9	280.5	282.9	286.6	290.7	295.7	301.6	307.6	312.5	318.5	325.2
165°	286.8	286.2	287.4	290.8	293.7	297.2	302.4	306.4	309.8	313.9	319.0
167.5°	291.6	290.9	292.0	294.2	296.3	298.4	302.3	305.6	307.2	309.8	313.1
170°	294.9	293.7	294.3	296.0	297.2	298.9	301.7	304.7	305.8	307.5	309.8
172.5°	296.7	296.0	295.7	297.4	298.1	299.3	301.3	303.3	304.0	304.8	306.6
175°	298.9	298.3	297.7	298.9	298.9	299.4	300.6	301.7	301.2	301.7	302.4
177.5°	299.9	299.0	298.5	299.4	299.4	299.4	299.9	300.8	299.9	299.4	299.9
180°	299.4	299.4	299.4	299.4	299.4	299.4	299.4	299.4	299.4	299.4	299.4



TEST NUMBER: P331344-840

CATALOG NUMBER: SA2XXDIP-C675D530U840-4F0-1E-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°	170.0	179.2	188.7	195.0	197.9	200.9	203.8	206.7
90°	172.9	180.9	191.2	197.7	200.5	203.2	205.9	208.7
92.5°	196.8	198.6	202.8	205.1	207.4	208.3	211.6	213.4
95°	286.9	260.4	245.0	238.0	233.3	231.4	232.5	235.8
97.5°	478.8	423.2	369.3	333.4	308.5	297.1	291.3	289.2
100°	645.8	582.9	512.5	448.3	403.0	380.8	366.6	358.7
102.5°	753.6	745.7	696.3	627.8	578.5	538.7	520.4	508.8
105°	804.5	877.6	893.0	879.3	846.1	812.9	790.7	785.2
107.5°	752.0	857.8	925.3	958.4	965.3	965.9	963.5	955.2
110°	709.0	819.4	900.5	952.6	980.0	993.4	1001.1	1003.0



TEST NUMBER: P331344-840

CATALOG NUMBER: SA2XXDIP-C675D530U840-4F0-1E-UDD-D4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	669.1	775.5	861.5	920.6	957.6	978.4	990.7	996.3
115°	618.6	714.3	796.6	860.6	904.0	933.0	950.5	958.2
117.5°	578.5	663.2	738.3	798.5	842.5	872.9	891.0	897.7
120°	557.1	635.0	702.5	759.3	802.1	831.7	850.9	859.2
122.5°	539.4	611.1	675.1	726.6	765.0	793.8	810.7	817.7
125°	512.8	578.2	635.1	682.5	717.9	741.8	758.3	765.0
127.5°	486.5	545.8	599.4	643.0	674.2	696.7	711.1	716.8
130°	469.7	524.6	575.6	617.3	647.4	668.8	682.2	688.6
132.5°	453.2	504.4	551.6	590.9	620.5	641.9	654.3	660.2
135°	430.4	473.2	516.0	551.7	578.2	599.1	611.3	615.4
137.5°	410.9	447.0	481.3	512.3	536.4	554.4	565.0	570.1
140°	398.7	430.0	460.2	488.1	507.9	524.2	534.2	539.1
142.5°	389.1	415.6	441.3	464.5	483.2	498.1	507.0	508.9
145°	376.5	396.9	416.2	434.0	449.1	460.0	466.9	469.8
147.5°	367.1	382.2	396.4	409.0	420.9	429.3	433.7	435.4
150°	361.6	374.4	386.5	396.8	405.5	412.3	415.8	416.4
152.5°	356.6	368.4	378.6	387.6	394.4	400.4	402.9	403.0
155°	349.6	358.8	367.4	373.8	380.1	384.2	386.5	385.3
157.5°	341.4	349.1	356.4	361.3	365.8	369.2	370.2	370.2
160°	336.3	342.6	349.0	353.0	357.1	359.9	360.5	360.5
162.5°	331.2	336.7	342.1	345.2	349.2	351.2	351.7	351.3
165°	323.7	327.7	331.7	334.1	336.3	338.6	338.6	338.1
167.5°	316.4	319.5	322.2	324.4	325.4	326.7	326.6	325.9
170°	312.8	314.5	316.8	317.9	318.5	320.2	319.6	318.5
172.5°	308.6	309.8	311.6	312.4	313.0	313.8	313.2	312.5
175°	304.1	304.7	305.3	305.8	305.8	306.4	305.8	304.7
177.5°	300.8	300.8	301.3	301.3	301.3	301.3	300.8	299.9
180°	299.4	299.4	299.4	299.4	299.4	299.4	299.4	299.4

(END OF REPORT)