

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: P331343-940

Luminaire Tested: **SA2XXDIP-C675D530U940-4F0-1E-UDD-D1**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P331343-940  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,  
Test Lab: INNOVATION CENTER  
Issue Date: 10/7/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: SA2XXDIP-C675D530U940-4F0-1E-UDD-D1  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 675 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 530 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4083.6 lumens  
Efficiency: N/A  
Efficacy: 101.3 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

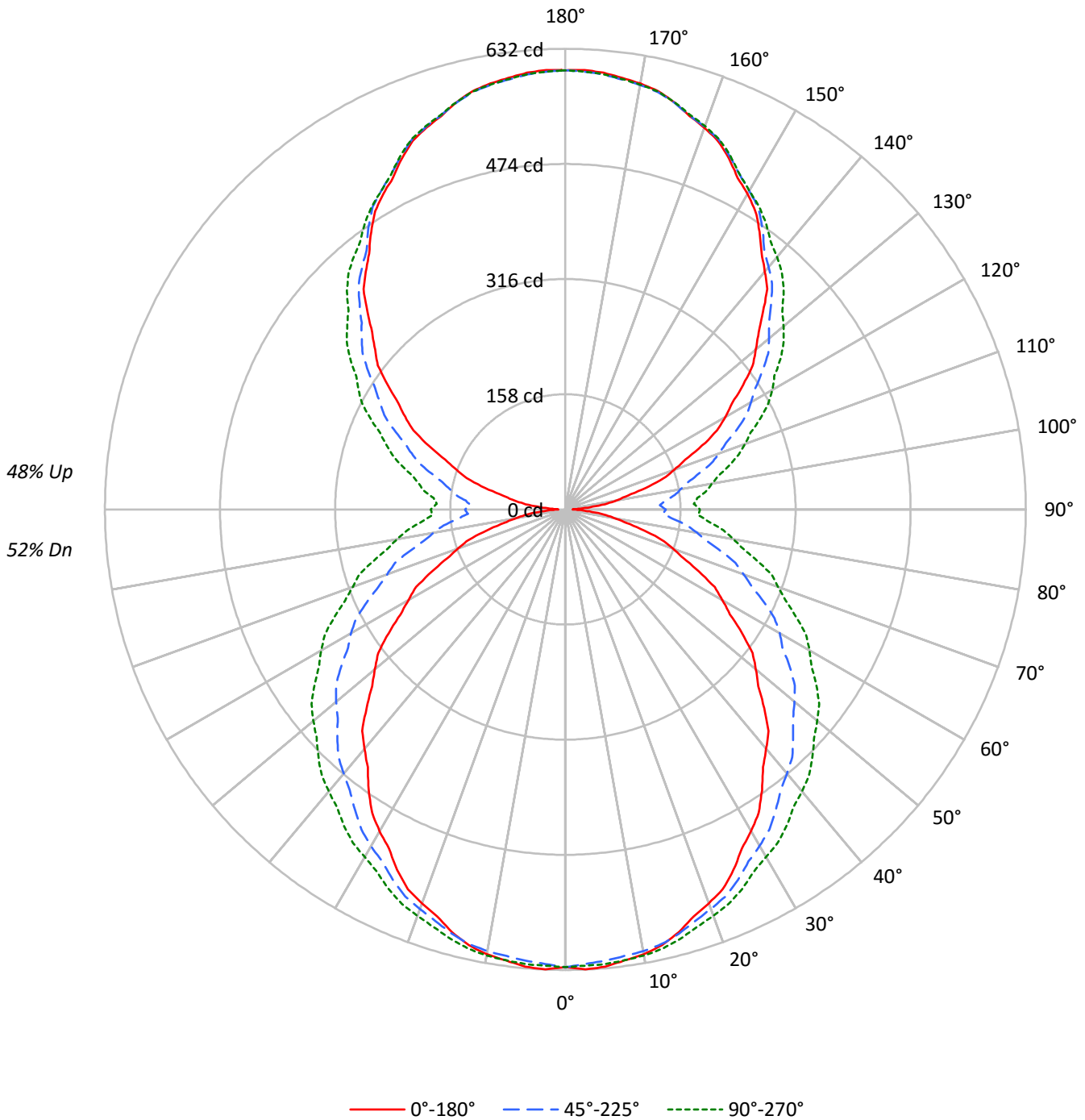
Input Watts (W): 40.3  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P331343-940

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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	50	30	10	0	
RCR																						
0	108	108	108	108	100	100	100	100	85	85	85	71	71	71	58	58	58	52				
1	97	92	87	83	89	85	81	77	72	69	66	60	58	56	49	47	46	41				
2	87	79	72	67	80	73	67	62	62	57	54	52	48	45	42	40	37	33				
3	79	69	61	55	73	64	57	51	54	49	44	45	41	38	37	34	31	27				
4	72	61	52	46	66	56	49	43	48	42	37	40	35	32	33	29	26	23				
5	66	54	45	39	61	50	42	37	43	37	32	36	31	27	29	26	23	20				
6	61	48	40	34	56	45	37	32	38	32	28	32	27	24	26	23	20	17				
7	56	43	35	29	52	40	33	28	35	29	24	29	24	21	24	20	18	15				
8	52	39	31	26	48	37	29	24	31	26	21	27	22	18	22	18	16	13				
9	49	36	28	23	45	33	26	22	29	23	19	24	20	17	20	17	14	12				
10	45	33	25	20	42	31	24	19	26	21	17	23	18	15	19	15	13	11				

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	10141	10141	10141
5°	10191	9762	9724
10°	10126	9474	9367
15°	9987	9168	8990
20°	9810	8841	8627
25°	9637	8525	8298
30°	9392	8201	7967
35°	9142	7888	7735
40°	8880	7621	7501
45°	8632	7383	7302
50°	8365	7166	7106
55°	8089	6934	6906
60°	7745	6695	6695
65°	7391	6412	6445
70°	6992	6110	6173
75°	6483	5811	5925
80°	5680	5509	5672
85°	4908	5245	5473



TEST NUMBER: P331343-940

CATALOG NUMBER: SA2XXDIP-C675D530U940-4F0-1E-UDD-D1

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	59.5	1.5
10°-20°	170.7	4.2
20°-30°	258.6	6.3
30°-40°	315.0	7.7
40°-50°	338.9	8.3
50°-60°	329.1	8.1
60°-70°	287.4	7.0
70°-80°	221.2	5.4
80°-90°	150.9	3.7
90°-100°	140.5	3.4
100°-110°	193.3	4.7
110°-120°	252.0	6.2
120°-130°	294.1	7.2
130°-140°	310.7	7.6
140°-150°	295.4	7.2
150°-160°	246.1	6.0
160°-170°	163.2	4.0
170°-180°	57.0	1.4
0°-30°	488.8	12.0
0°-40°	803.8	19.7
0°-60°	1471.8	36.0
0°-90°	2131.3	52.2
90°-120°	585.8	14.3
90°-150°	1486.0	36.4
90°-180°	1952.0	47.8
0°-180°	4083.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	628	628	628	628	628	
5°	630	627	622	627	626	60
15°	601	602	603	610	610	169
25°	546	553	561	571	574	251
35°	471	486	503	523	530	294
45°	386	411	442	470	480	298
55°	296	329	376	408	420	264
65°	202	247	300	336	350	201
75°	112	163	221	259	272	118
85°	33	89	148	184	198	35
90°	10	69	138	172	185	7
95°	34	82	137	170	182	36
105°	114	143	190	222	233	121
115°	207	222	260	286	295	204
125°	298	304	330	352	361	266
135°	384	390	400	417	424	297
145°	465	468	471	477	480	290
155°	531	533	534	537	536	244
165°	578	578	578	581	579	163
175°	602	600	599	602	600	57
180°	602	602	602	602	602	



TEST NUMBER: P331343-940

CATALOG NUMBER: SA2XXDIP-C675D530U940-4F0-1E-UDD-D1

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	628.1	628.1	628.1	628.1	628.1	628.1	628.1	628.1	628.1	628.1	628.1
2.5°	631.8	631.2	630.8	630.3	629.8	629.0	627.9	626.7	625.6	624.5	625.3
5°	629.9	629.3	628.7	628.1	627.5	626.6	625.4	624.2	622.9	621.7	622.9
7.5°	624.3	623.8	623.5	623.0	622.7	622.0	621.1	620.1	619.2	618.3	619.7
10°	619.9	619.5	619.1	618.7	618.3	617.8	617.2	616.6	616.0	615.4	617.0
12.5°	612.6	612.7	612.8	612.9	613.0	612.8	612.3	611.9	611.4	611.0	612.6
15°	600.8	601.2	601.6	602.0	602.4	602.6	602.6	602.6	602.6	602.6	604.4
17.5°	585.5	586.4	587.2	588.1	588.9	589.7	590.3	590.9	591.6	592.3	594.1
20°	575.3	576.3	577.3	578.4	579.3	580.2	581.0	581.9	582.7	583.5	585.8
22.5°	564.4	565.5	566.8	567.9	569.1	570.2	571.4	572.5	573.6	574.8	577.0
25°	546.2	547.6	549.0	550.5	551.9	553.5	555.3	557.1	558.9	560.7	563.2
27.5°	524.3	526.6	529.0	531.3	533.6	535.8	538.0	540.1	542.2	544.4	547.4
30°	509.8	512.4	515.1	517.6	520.3	522.9	525.6	528.2	530.8	533.4	536.6
32.5°	493.7	496.7	499.6	502.6	505.6	508.6	511.8	514.8	517.9	521.0	524.8
35°	470.6	474.0	477.5	480.9	484.4	488.0	491.9	495.7	499.5	503.4	507.8
37.5°	445.5	449.5	453.4	457.4	461.4	465.8	470.8	475.8	480.7	485.7	490.7
40°	428.7	433.2	437.7	442.1	446.6	451.5	457.0	462.4	467.9	473.3	478.6
42.5°	412.8	417.1	421.6	426.1	430.5	435.9	442.2	448.4	454.7	461.0	466.7
45°	385.9	391.5	396.9	402.3	407.8	414.1	421.2	428.3	435.3	442.4	448.7
47.5°	359.5	365.5	371.5	377.4	383.3	390.5	398.8	407.1	415.4	423.7	430.3
50°	341.3	347.7	353.9	360.2	366.4	374.2	383.3	392.4	401.4	410.5	417.4
52.5°	323.9	330.5	337.1	343.7	350.3	358.4	367.9	377.6	387.1	396.7	403.8
55°	295.9	303.1	310.4	317.7	324.9	333.9	344.4	354.9	365.4	375.9	383.3
57.5°	268.1	276.4	284.6	292.8	301.0	310.5	321.2	331.9	342.7	353.4	361.2
60°	248.5	257.2	265.9	274.6	283.3	293.5	305.0	316.5	328.0	339.6	347.2
62.5°	231.0	240.0	249.1	258.1	267.2	277.4	288.9	300.4	312.0	323.5	331.7
65°	202.1	212.0	221.9	231.8	241.7	252.6	264.6	276.5	288.5	300.4	308.7
67.5°	175.5	185.8	196.3	206.6	217.0	228.2	240.4	252.6	264.8	277.1	285.4
70°	156.6	167.1	177.6	188.2	198.7	210.2	222.7	235.2	247.8	260.4	269.0
72.5°	139.1	149.9	160.8	171.7	182.4	194.2	207.0	219.6	232.4	245.0	253.6
75°	112.0	123.3	134.6	146.0	157.3	169.4	182.4	195.3	208.2	221.2	229.9
77.5°	85.8	97.6	109.5	121.3	133.1	145.7	158.8	172.0	185.1	198.2	207.0
80°	68.3	80.6	92.9	105.3	117.6	130.4	143.6	156.7	169.8	183.0	191.5
82.5°	53.7	65.9	78.0	90.2	102.5	115.1	128.5	141.8	155.1	168.4	176.9
85°	32.8	45.3	57.9	70.4	82.9	95.7	108.6	121.5	134.6	147.5	156.0
87.5°	17.9	30.2	42.6	54.9	67.2	80.2	93.5	107.0	120.5	133.9	142.1
90°	9.6	22.7	35.8	48.9	62.0	76.2	91.7	107.1	122.5	137.9	145.8
92.5°	17.4	29.3	41.3	53.1	65.1	77.6	90.6	103.7	116.7	129.7	137.8
95°	33.7	44.3	55.0	65.6	76.2	87.7	100.1	112.5	124.8	137.2	144.9
97.5°	54.7	64.1	73.6	83.0	92.5	103.3	115.3	127.4	139.5	151.6	159.1
100°	71.0	79.4	87.7	96.1	104.5	114.5	126.2	137.9	149.5	161.2	168.7
102.5°	87.3	94.9	102.5	109.9	117.5	127.1	138.5	149.9	161.3	172.8	180.2
105°	113.9	120.1	126.3	132.5	138.7	147.1	157.9	168.6	179.4	190.1	197.4
107.5°	141.6	146.8	151.9	157.1	162.3	170.0	180.0	190.1	200.2	210.3	217.1
110°	158.7	163.5	168.2	172.9	177.6	184.9	194.8	204.7	214.7	224.6	231.0



TEST NUMBER: P331343-940

CATALOG NUMBER: SA2XXDIP-C675D530U940-4F0-1E-UDD-D1

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	178.3	182.4	186.4	190.5	194.6	201.3	210.6	220.0	229.3	238.6	244.8
115°	207.1	209.9	212.9	215.7	218.6	224.5	233.4	242.3	251.2	260.0	266.0
117.5°	234.8	237.2	239.5	241.9	244.2	249.3	257.1	264.9	272.7	280.4	286.1
120°	254.0	255.7	257.3	259.0	260.7	265.2	272.4	279.6	286.8	294.0	299.6
122.5°	271.4	272.9	274.2	275.6	277.1	281.2	288.2	295.2	302.2	309.2	314.3
125°	297.7	298.8	299.8	300.8	301.8	305.4	311.6	317.7	323.8	329.9	335.1
127.5°	324.3	325.4	326.5	327.5	328.7	331.6	336.4	341.3	346.1	350.9	355.4
130°	341.0	342.2	343.5	344.8	346.1	348.7	352.8	356.8	360.8	364.8	369.4
132.5°	359.7	360.7	361.7	362.7	363.6	365.9	369.2	372.5	375.8	379.2	383.3
135°	383.8	385.0	386.3	387.5	388.8	390.5	392.8	395.0	397.3	399.5	403.7
137.5°	410.2	411.1	412.1	413.0	414.0	415.1	416.3	417.5	418.7	419.9	423.5
140°	426.0	426.9	427.7	428.5	429.3	430.2	431.1	432.1	433.1	434.0	437.3
142.5°	442.3	443.1	443.9	444.7	445.5	446.2	446.7	447.1	447.5	448.1	450.8
145°	464.8	465.6	466.4	467.2	468.0	468.7	469.3	470.0	470.7	471.4	472.7
147.5°	485.6	486.5	487.5	488.5	489.4	490.1	490.5	491.0	491.4	492.0	492.3
150°	499.9	500.5	501.2	501.9	502.6	503.1	503.5	504.0	504.4	505.0	505.2
152.5°	512.5	513.2	513.8	514.5	515.1	515.8	516.3	516.8	517.4	518.0	518.4
155°	531.4	531.7	532.1	532.4	532.7	533.1	533.4	533.8	534.0	534.4	535.0
157.5°	547.5	547.8	548.0	548.2	548.5	548.7	548.8	549.1	549.3	549.5	550.3
160°	557.3	557.5	557.8	557.9	558.2	558.4	558.5	558.6	558.7	558.8	559.5
162.5°	566.2	566.3	566.3	566.4	566.4	566.5	566.6	566.8	566.9	566.9	567.8
165°	578.2	578.0	577.9	577.8	577.7	577.7	577.7	577.7	577.7	577.7	578.5
167.5°	588.1	587.8	587.5	587.1	586.7	586.6	586.6	586.6	586.5	586.5	587.3
170°	593.4	593.1	592.7	592.4	592.1	591.8	591.7	591.6	591.5	591.4	592.2
172.5°	597.1	596.7	596.4	596.0	595.8	595.5	595.4	595.3	595.1	595.0	595.8
175°	601.5	601.2	600.8	600.6	600.2	599.9	599.7	599.5	599.2	599.0	599.8
177.5°	603.4	603.1	602.8	602.5	602.3	602.1	601.9	601.7	601.5	601.4	601.9
180°	602.5	602.5	602.5	602.5	602.5	602.5	602.5	602.5	602.5	602.5	602.5



TEST NUMBER: P331343-940

CATALOG NUMBER: SA2XXDIP-C675D530U940-4F0-1E-UDD-D1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	628.1	628.1	628.1	628.1	628.1	628.1	628.1	628.1
2.5°	626.1	626.9	627.7	627.9	627.6	627.3	627.0	626.7
5°	624.2	625.4	626.6	627.1	626.9	626.7	626.5	626.2
7.5°	621.2	622.7	624.1	624.7	624.6	624.3	624.1	623.9
10°	618.6	620.2	621.9	622.5	622.3	622.1	622.0	621.7
12.5°	614.2	615.8	617.5	618.1	618.0	617.8	617.6	617.3
15°	606.3	608.1	609.9	610.7	610.6	610.3	610.1	609.9
17.5°	596.0	598.0	599.9	600.8	600.8	600.8	600.8	600.8
20°	588.0	590.2	592.4	593.5	593.5	593.5	593.5	593.5
22.5°	579.3	581.5	583.6	585.0	585.2	585.6	585.9	586.2
25°	565.6	568.0	570.4	571.9	572.6	573.2	573.8	574.4
27.5°	550.5	553.6	556.7	558.4	558.8	559.3	559.7	560.2
30°	539.9	543.1	546.4	548.3	548.9	549.6	550.1	550.7
32.5°	528.5	532.3	535.9	538.3	539.5	540.6	541.6	542.7
35°	512.3	516.7	521.2	524.1	525.6	527.0	528.3	529.8
37.5°	495.6	500.5	505.5	508.7	510.2	511.7	513.2	514.7
40°	483.8	489.1	494.4	497.9	499.7	501.6	503.4	505.2
42.5°	472.4	478.2	483.9	487.8	489.5	491.4	493.2	495.0
45°	455.0	461.2	467.5	471.6	473.7	475.7	477.7	479.7
47.5°	436.8	443.4	449.9	454.2	456.5	458.7	460.9	463.2
50°	424.3	431.1	438.1	442.6	444.9	447.1	449.2	451.5
52.5°	410.8	417.9	424.9	429.6	431.9	434.4	436.8	439.2
55°	390.5	397.8	405.1	410.0	412.7	415.3	417.9	420.5
57.5°	369.1	376.9	384.8	390.0	392.7	395.4	398.1	400.7
60°	354.9	362.6	370.3	375.6	378.4	381.2	384.1	386.9
62.5°	339.8	348.0	356.2	361.7	364.3	366.9	369.6	372.3
65°	317.0	325.3	333.6	339.0	341.7	344.3	347.0	349.6
67.5°	293.8	302.2	310.6	316.2	318.9	321.6	324.4	327.2
70°	277.8	286.4	295.2	300.7	303.1	305.6	308.0	310.4
72.5°	262.2	270.6	279.2	284.9	287.8	290.8	293.6	296.6
75°	238.6	247.3	256.0	261.6	264.3	266.9	269.6	272.2
77.5°	215.6	224.3	232.9	238.6	241.5	244.3	247.1	249.9
80°	199.9	208.5	217.0	222.7	225.4	228.3	231.1	234.0
82.5°	185.4	193.9	202.4	207.9	210.6	213.3	216.0	218.6
85°	164.4	173.0	181.5	187.1	189.9	192.8	195.6	198.4
87.5°	150.3	158.5	166.7	172.2	174.8	177.4	180.0	182.6
90°	153.7	161.6	169.4	174.6	177.2	179.7	182.3	184.8
92.5°	145.7	153.7	161.7	166.9	169.3	171.8	174.2	176.6
95°	152.6	160.3	168.0	172.9	175.1	177.4	179.5	181.7
97.5°	166.6	174.1	181.6	186.5	188.8	191.2	193.5	195.9
100°	176.2	183.7	191.2	195.9	198.0	200.2	202.2	204.4
102.5°	187.6	195.0	202.4	207.2	209.3	211.4	213.6	215.6
105°	204.7	212.0	219.4	224.2	226.4	228.6	230.9	233.0
107.5°	224.0	231.0	237.8	242.1	243.8	245.5	247.2	248.9
110°	237.6	244.0	250.5	254.7	256.5	258.4	260.3	262.3





TEST NUMBER: P331343-940

CATALOG NUMBER: SA2XXDIP-C675D530U940-4F0-1E-UDD-D1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	251.0	257.3	263.4	267.5	269.5	271.4	273.4	275.4
115°	272.0	277.9	283.8	287.8	289.7	291.6	293.5	295.3
117.5°	291.9	297.6	303.4	307.0	308.8	310.5	312.2	314.0
120°	305.3	310.9	316.6	320.4	322.3	324.2	326.1	328.0
122.5°	319.6	324.9	330.0	333.5	335.2	336.8	338.5	340.1
125°	340.2	345.3	350.4	353.8	355.5	357.3	359.0	360.7
127.5°	360.1	364.7	369.3	372.3	373.7	375.1	376.6	378.0
130°	374.1	378.7	383.3	386.2	387.4	388.5	389.7	390.8
132.5°	387.5	391.7	395.9	398.6	399.9	401.2	402.4	403.7
135°	407.8	411.9	416.1	418.7	420.1	421.3	422.6	423.9
137.5°	427.1	430.8	434.4	436.7	437.6	438.5	439.4	440.3
140°	440.5	443.7	447.0	449.0	449.8	450.5	451.3	452.0
142.5°	453.4	456.1	458.8	460.4	461.0	461.6	462.2	462.8
145°	474.0	475.4	476.7	477.6	478.2	478.8	479.3	479.8
147.5°	492.8	493.1	493.6	493.8	493.8	493.9	493.9	494.0
150°	505.6	506.0	506.3	506.3	506.0	505.6	505.2	505.0
152.5°	518.8	519.2	519.7	519.7	519.2	518.8	518.4	518.0
155°	535.6	536.1	536.7	536.8	536.5	536.1	535.7	535.5
157.5°	551.0	551.8	552.6	552.7	552.1	551.6	551.1	550.5
160°	560.2	560.9	561.5	561.7	561.2	560.8	560.3	559.8
162.5°	568.5	569.3	570.1	570.2	569.6	569.1	568.6	568.0
165°	579.3	580.1	580.8	580.9	580.3	579.8	579.3	578.6
167.5°	588.1	588.9	589.7	589.8	589.2	588.6	588.0	587.4
170°	593.0	593.8	594.5	594.6	593.9	593.3	592.5	591.9
172.5°	596.6	597.4	598.2	598.2	597.6	596.9	596.2	595.6
175°	600.6	601.4	602.2	602.3	601.5	600.8	600.2	599.5
177.5°	602.4	603.0	603.5	603.5	603.0	602.4	601.9	601.4
180°	602.5	602.5	602.5	602.5	602.5	602.5	602.5	602.5

(END OF REPORT)