

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: P331679-935

Luminaire Tested: **SA2XXRDIP-C675D330U935-4F0-1E-UDD-F1**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331679-935
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: SA2XXRDIP-C675D330U935-4F0-1E-UDD-F1
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 675 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 330 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

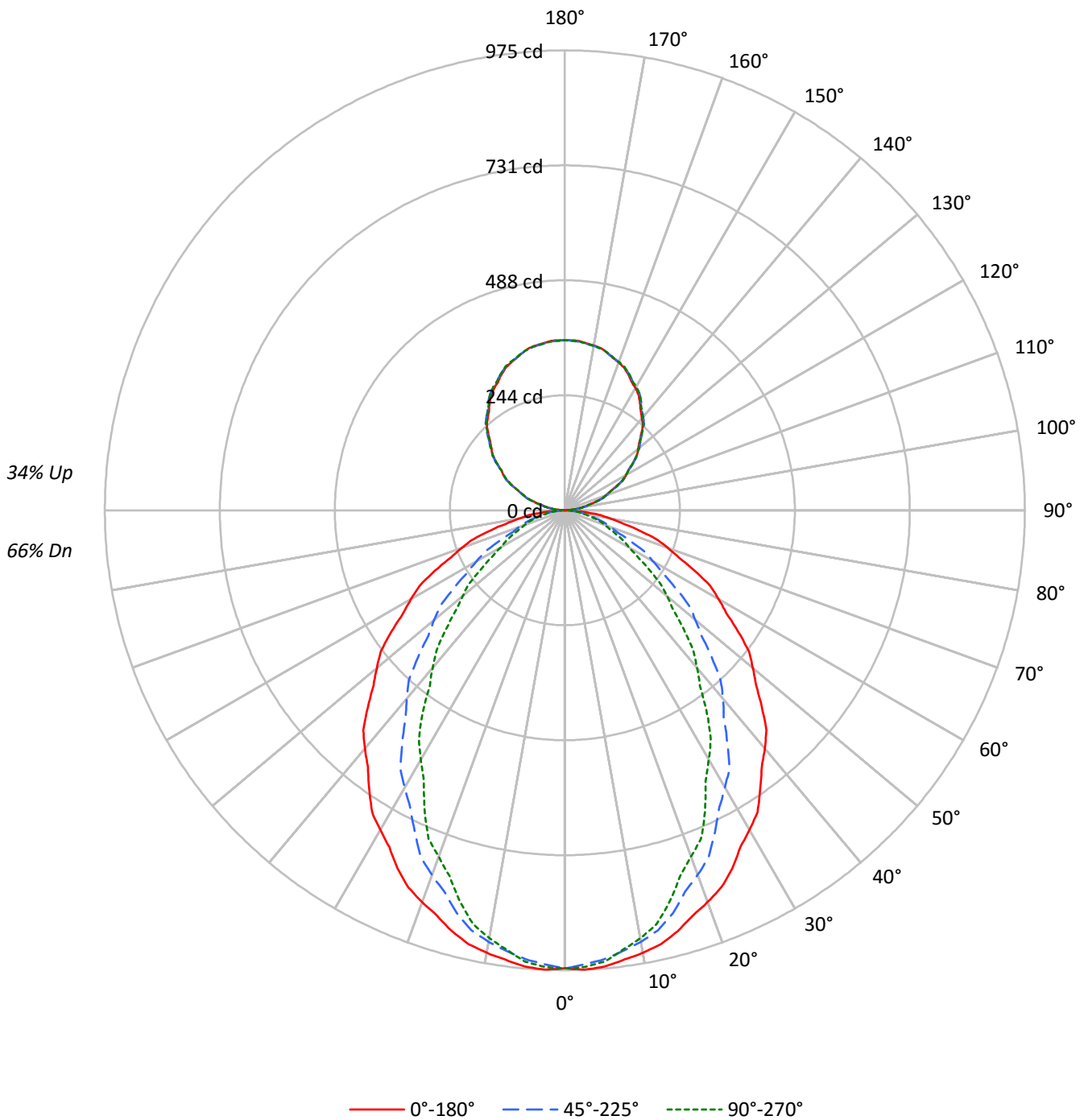
Lumens per Lamp: N/A
Luminaire Lumens: 3007.0 lumens
Efficiency: N/A
Efficacy: 85.9 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 35
Input Voltage (V): 120
Input Current (A_{in}): 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: P331679-935
CATALOG NUMBER: SA2XXRDIP-C675D330U935-4F0-1E-UDD-F1

Luminous Intensity Polar Plot





TEST NUMBER: P331679-935

CATALOG NUMBER: SA2XXRDIP-C675D330U935-4F0-1E-UDD-F1

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	111	111	111	111	105	105	105	105	92	92	92	81	81	81	71	71	71	66				
1	102	98	94	91	96	92	89	86	82	80	77	73	71	69	64	63	61	57				
2	94	86	80	75	88	82	76	72	73	69	65	65	62	59	57	55	53	49				
3	86	76	69	64	81	72	66	61	65	60	56	58	54	51	51	48	46	42				
4	79	68	60	54	74	65	58	52	58	52	48	52	47	44	46	43	40	37				
5	73	61	53	47	68	58	51	45	52	46	42	47	42	39	42	38	35	32				
6	67	55	47	41	63	53	45	40	47	41	37	43	38	34	38	34	31	29				
7	62	50	42	37	59	48	41	35	43	37	33	39	34	31	35	31	28	26				
8	58	46	38	33	55	44	37	32	40	34	30	36	31	27	32	28	25	23				
9	54	42	35	30	51	40	33	29	37	31	27	33	28	25	30	26	23	21				
10	51	39	32	27	48	37	30	26	34	28	24	31	26	23	28	24	21	19				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	15681	15681	15681
5°	15741	15486	15571
10°	15621	15231	15101
15°	15442	14780	14355
20°	15192	14136	13426
25°	14938	13402	12527
30°	14585	12652	11373
35°	14241	11832	10360
40°	13894	10985	9187
45°	13486	10035	8127
50°	13069	9075	7086
55°	12645	8042	6086
60°	12148	6952	5050
65°	11584	5841	4604
70°	10914	4810	4230
75°	10087	4386	3949
80°	8908	3924	3598
85°	7003	3094	3094



TEST NUMBER: P331679-935

CATALOG NUMBER: SA2XXRDIP-C675D330U935-4F0-1E-UDD-F1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	90.9	3.0
10°-20°	249.6	8.3
20°-30°	350.5	11.7
30°-40°	382.2	12.7
40°-50°	351.5	11.7
50°-60°	276.0	9.2
60°-70°	180.0	6.0
70°-80°	92.8	3.1
80°-90°	25.5	0.8
90°-100°	22.8	0.8
100°-110°	70.9	2.4
110°-120°	121.3	4.0
120°-130°	159.5	5.3
130°-140°	179.0	6.0
140°-150°	175.5	5.8
150°-160°	147.2	4.9
160°-170°	97.6	3.2
170°-180°	34.1	1.1
0°-30°	691.1	23.0
0°-40°	1073.3	35.7
0°-60°	1700.8	56.6
0°-90°	1999.0	66.5
90°-120°	215.0	7.2
90°-150°	729.0	24.2
90°-180°	1008.0	33.5
0°-180°	3007.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	971	971	971	971	971	
5°	971	966	956	963	961	92
15°	924	913	884	868	859	260
25°	838	809	752	718	703	385
35°	722	676	600	547	526	452
45°	591	530	440	379	356	456
55°	449	379	286	235	216	401
65°	303	232	153	125	120	300
75°	162	102	70	64	63	171
85°	38	20	17	17	17	45
90°	0	4	11	10	10	2
95°	16	19	20	19	19	18
105°	65	66	67	68	68	69
115°	122	123	123	123	122	120
125°	177	180	179	178	178	158
135°	229	232	233	233	232	177
145°	278	280	282	282	281	174
155°	318	319	320	321	320	146
165°	346	346	346	347	346	98
175°	360	359	358	360	359	34
180°	360	360	360	360	360	



TEST NUMBER: P331679-935

CATALOG NUMBER: SA2XXRDIP-C675D330U935-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	971.2	971.2	971.2	971.2	971.2	971.2	971.2	971.2	971.2	971.2	971.2
2.5°	974.7	974.0	973.2	972.4	971.6	970.3	968.6	966.9	965.3	963.5	965.1
5°	971.2	970.3	969.3	968.3	967.3	965.6	963.0	960.5	957.9	955.5	957.2
7.5°	961.2	960.0	958.8	957.6	956.4	954.2	951.3	948.4	945.4	942.5	942.9
10°	952.8	951.4	950.0	948.6	947.3	944.7	940.7	936.9	933.0	929.0	928.5
12.5°	942.2	940.6	938.8	937.2	935.5	932.2	927.2	922.2	917.1	912.1	911.1
15°	923.8	921.6	919.5	917.3	915.2	910.8	904.1	897.5	890.9	884.2	880.5
17.5°	901.1	897.9	894.6	891.2	887.9	882.1	873.6	865.0	856.5	848.0	843.6
20°	884.2	880.3	876.4	872.5	868.6	861.8	852.0	842.2	832.5	822.7	817.8
22.5°	865.9	861.6	857.2	852.8	848.4	840.8	829.7	818.7	807.7	796.7	790.4
25°	838.5	832.2	826.0	819.8	813.6	803.9	791.1	778.2	765.3	752.3	744.3
27.5°	805.5	798.7	791.9	785.1	778.3	767.6	753.1	738.6	724.0	709.5	700.2
30°	782.3	774.8	767.4	760.0	752.6	741.1	725.4	709.8	694.1	678.6	668.6
32.5°	759.7	751.1	742.4	733.7	725.0	712.7	696.8	680.9	665.0	649.0	637.7
35°	722.5	712.6	702.6	692.6	682.7	669.1	651.9	634.7	617.5	600.3	588.0
37.5°	685.3	674.2	663.3	652.4	641.4	626.8	608.6	590.2	571.9	553.5	540.0
40°	659.2	647.5	635.8	624.1	612.3	597.0	578.1	559.1	540.2	521.2	507.4
42.5°	632.5	620.2	607.8	595.5	583.2	567.1	547.6	528.1	508.4	488.9	474.5
45°	590.6	577.6	564.5	551.4	538.3	521.5	501.0	480.5	459.9	439.5	425.6
47.5°	549.8	536.0	522.1	508.2	494.4	476.9	455.7	434.5	413.4	392.2	378.4
50°	520.3	506.4	492.6	478.7	464.9	447.2	425.7	404.2	382.7	361.3	347.8
52.5°	491.5	477.0	462.5	448.1	433.5	415.8	394.8	373.8	352.8	331.7	318.7
55°	449.2	433.9	418.7	403.5	388.2	370.1	349.0	327.9	306.8	285.7	274.0
57.5°	405.7	390.1	374.4	358.9	343.2	325.3	305.0	284.7	264.4	244.2	233.4
60°	376.2	360.6	344.9	329.3	313.7	295.8	275.7	255.5	235.5	215.3	205.3
62.5°	347.3	331.7	316.1	300.5	284.8	267.4	248.3	229.1	209.9	190.7	181.2
65°	303.2	287.4	271.6	255.8	240.0	223.3	205.7	188.1	170.5	152.9	146.3
67.5°	260.7	245.0	229.3	213.6	197.9	182.1	166.3	150.5	134.7	118.8	115.8
70°	231.2	215.9	200.7	185.5	170.2	155.8	142.4	128.9	115.5	101.9	100.0
72.5°	203.0	188.4	173.8	159.2	144.6	131.9	121.1	110.2	99.4	88.6	87.0
75°	161.7	148.1	134.4	120.7	107.0	96.9	90.2	83.6	77.0	70.3	69.0
77.5°	121.1	109.1	97.1	85.2	73.2	65.5	62.3	59.2	56.0	52.8	51.9
80°	95.8	85.8	75.9	66.0	56.0	50.0	48.0	46.1	44.2	42.2	41.4
82.5°	72.6	64.8	57.1	49.2	41.5	36.9	35.6	34.3	33.0	31.7	31.2
85°	37.8	33.7	29.6	25.5	21.4	19.0	18.4	17.9	17.3	16.7	16.7
87.5°	11.3	10.2	9.1	8.0	7.0	6.5	6.9	7.1	7.5	7.7	7.6
90°	0.3	1.1	1.9	2.8	3.5	4.7	6.2	7.7	9.1	10.7	10.5
92.5°	5.4	6.0	6.6	7.2	7.8	8.3	8.6	9.0	9.3	9.6	9.7
95°	15.8	16.5	17.1	17.8	18.5	18.9	19.0	19.2	19.4	19.5	19.5
97.5°	28.9	29.5	30.0	30.7	31.3	31.7	31.9	32.2	32.5	32.7	32.7
100°	38.7	39.2	39.7	40.3	40.8	41.2	41.3	41.6	41.8	42.0	42.0
102.5°	48.8	49.2	49.7	50.1	50.5	51.0	51.1	51.4	51.7	51.9	52.0
105°	65.4	65.6	65.8	66.0	66.2	66.4	66.6	66.6	66.8	66.9	67.1
107.5°	82.1	82.4	82.7	83.0	83.3	83.4	83.4	83.4	83.4	83.4	83.4
110°	92.8	93.2	93.6	94.0	94.4	94.6	94.6	94.6	94.6	94.6	94.6



TEST NUMBER: P331679-935

CATALOG NUMBER: SA2XXRDIP-C675D330U935-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	104.4	104.9	105.3	105.6	106.1	106.2	106.2	106.2	106.1	106.1	105.9
115°	121.7	122.1	122.5	122.9	123.3	123.5	123.3	123.1	123.0	122.9	122.9
117.5°	138.8	139.4	139.9	140.4	141.0	141.1	140.7	140.3	139.9	139.6	139.4
120°	150.2	150.8	151.4	151.9	152.4	152.4	151.9	151.4	150.8	150.2	150.2
122.5°	160.7	161.4	162.0	162.6	163.3	163.5	163.1	162.7	162.3	162.0	161.8
125°	177.0	177.6	178.2	178.8	179.4	179.7	179.4	179.3	179.1	178.8	178.7
127.5°	193.0	193.7	194.5	195.2	196.0	196.2	196.0	195.8	195.5	195.3	195.0
130°	202.9	203.8	204.7	205.5	206.4	206.8	206.6	206.6	206.4	206.2	206.1
132.5°	214.1	214.8	215.5	216.2	217.0	217.3	217.3	217.4	217.4	217.4	217.1
135°	229.0	229.8	230.6	231.3	232.0	232.5	232.6	232.7	232.9	233.0	232.9
137.5°	244.8	245.4	246.0	246.7	247.3	247.6	247.8	248.0	248.1	248.3	248.3
140°	254.3	254.9	255.5	256.1	256.8	257.2	257.5	257.9	258.2	258.6	258.6
142.5°	264.1	264.7	265.3	265.9	266.5	266.9	267.1	267.3	267.6	267.8	267.9
145°	278.0	278.5	279.0	279.5	279.9	280.3	280.8	281.2	281.5	282.0	282.1
147.5°	290.5	291.1	291.6	292.2	292.7	293.2	293.4	293.8	294.0	294.3	294.5
150°	299.0	299.5	299.8	300.2	300.7	301.0	301.3	301.5	301.8	302.0	302.3
152.5°	306.6	306.9	307.4	307.8	308.2	308.6	308.8	309.2	309.5	309.9	310.1
155°	317.9	318.1	318.3	318.5	318.7	318.9	319.1	319.3	319.5	319.7	320.0
157.5°	327.5	327.7	327.8	328.0	328.1	328.2	328.4	328.5	328.6	328.7	329.2
160°	333.4	333.6	333.6	333.8	333.9	334.1	334.1	334.2	334.2	334.3	334.7
162.5°	338.7	338.8	338.8	338.8	338.9	338.9	339.0	339.1	339.1	339.1	339.7
165°	345.9	345.8	345.7	345.7	345.6	345.5	345.5	345.5	345.5	345.5	346.0
167.5°	351.8	351.6	351.5	351.2	351.0	350.9	350.9	350.9	350.9	350.9	351.3
170°	355.0	354.8	354.6	354.4	354.2	354.0	354.0	353.9	353.9	353.8	354.2
172.5°	357.1	357.0	356.8	356.5	356.4	356.2	356.2	356.1	356.0	355.9	356.5
175°	359.9	359.6	359.5	359.2	359.0	358.9	358.8	358.6	358.4	358.3	358.8
177.5°	360.9	360.8	360.6	360.5	360.3	360.2	360.1	360.0	359.8	359.7	360.1
180°	360.5	360.5	360.5	360.5	360.5	360.5	360.5	360.5	360.5	360.5	360.5



TEST NUMBER: P331679-935

CATALOG NUMBER: SA2XXRDIP-C675D330U935-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	971.2	971.2	971.2	971.2	971.2	971.2	971.2	971.2
2.5°	966.6	968.2	969.7	970.3	970.1	969.7	969.5	969.1
5°	958.9	960.7	962.4	963.0	962.4	961.8	961.3	960.7
7.5°	943.4	943.9	944.4	944.2	943.1	942.2	941.2	940.1
10°	927.9	927.3	926.7	925.8	924.6	923.5	922.3	921.1
12.5°	910.1	909.0	907.9	906.5	904.5	902.6	900.6	898.6
15°	876.8	873.1	869.4	866.5	864.6	862.6	860.7	858.8
17.5°	839.2	834.7	830.3	826.5	823.1	819.8	816.4	813.0
20°	813.0	808.0	803.1	798.6	794.3	790.0	785.7	781.4
22.5°	784.1	777.8	771.5	766.8	763.5	760.3	757.2	754.0
25°	736.3	728.3	720.3	714.9	712.0	709.0	706.1	703.2
27.5°	690.8	681.5	672.2	665.1	660.5	655.8	651.2	646.5
30°	658.7	648.7	638.7	631.1	625.8	620.5	615.3	610.0
32.5°	626.3	614.9	603.6	595.4	590.4	585.5	580.5	575.6
35°	575.8	563.4	551.1	542.8	538.5	534.2	529.9	525.6
37.5°	526.4	512.9	499.4	490.1	485.2	480.3	475.4	470.5
40°	493.4	479.6	465.7	456.2	451.2	446.1	441.0	435.9
42.5°	460.2	445.8	431.5	421.9	417.0	412.1	407.2	402.2
45°	411.7	397.9	384.0	374.7	370.1	365.3	360.7	355.9
47.5°	364.6	350.9	337.0	328.0	323.7	319.5	315.2	311.0
50°	334.3	320.8	307.4	298.5	294.5	290.3	286.3	282.1
52.5°	305.7	292.7	279.7	271.3	267.5	263.7	259.9	256.1
55°	262.3	250.5	238.8	231.1	227.4	223.6	219.9	216.2
57.5°	222.7	212.0	201.2	194.2	191.1	188.0	184.9	181.8
60°	195.4	185.5	175.5	168.9	165.8	162.7	159.5	156.4
62.5°	171.8	162.2	152.7	147.1	145.2	143.4	141.5	139.6
65°	139.7	133.0	126.4	122.8	122.2	121.6	121.0	120.5
67.5°	112.7	109.7	106.7	104.8	104.2	103.6	103.0	102.3
70°	98.1	96.1	94.1	92.8	92.0	91.2	90.4	89.6
72.5°	85.3	83.7	82.1	81.0	80.5	80.1	79.6	79.1
75°	67.6	66.2	64.8	64.1	63.9	63.7	63.5	63.3
77.5°	51.1	50.4	49.6	49.1	48.7	48.5	48.1	47.8
80°	40.6	39.9	39.1	38.7	38.7	38.7	38.7	38.7
82.5°	30.7	30.2	29.8	29.5	29.5	29.5	29.5	29.5
85°	16.7	16.7	16.7	16.7	16.7	16.7	16.7	16.7
87.5°	7.4	7.2	7.1	7.0	7.0	7.0	7.0	7.0
90°	10.4	10.2	10.1	10.1	10.2	10.2	10.2	10.3
92.5°	9.7	9.7	9.8	9.8	9.8	9.8	9.8	9.8
95°	19.5	19.5	19.5	19.4	19.3	19.1	19.0	18.9
97.5°	32.7	32.7	32.7	32.7	32.7	32.7	32.7	32.6
100°	42.0	42.0	42.0	41.9	41.8	41.8	41.8	41.7
102.5°	52.1	52.1	52.2	52.2	52.1	52.0	52.0	51.9
105°	67.2	67.3	67.5	67.5	67.5	67.5	67.5	67.5
107.5°	83.5	83.6	83.6	83.5	83.2	82.9	82.6	82.2
110°	94.6	94.6	94.6	94.5	94.3	94.1	93.9	93.7



TEST NUMBER: P331679-935

CATALOG NUMBER: SA2XXRDIP-C675D330U935-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	105.7	105.6	105.4	105.2	105.1	105.0	104.8	104.6
115°	122.8	122.7	122.6	122.5	122.3	122.1	121.9	121.7
117.5°	139.2	139.1	138.9	138.7	138.5	138.4	138.1	137.9
120°	150.2	150.2	150.2	150.2	150.0	149.7	149.6	149.4
122.5°	161.6	161.4	161.3	161.2	161.0	160.8	160.7	160.6
125°	178.5	178.2	178.1	177.9	177.9	177.8	177.7	177.6
127.5°	194.8	194.6	194.3	194.1	193.9	193.6	193.5	193.2
130°	206.0	205.9	205.7	205.5	205.3	204.9	204.7	204.4
132.5°	216.8	216.5	216.3	216.0	215.8	215.6	215.3	215.2
135°	232.9	232.8	232.7	232.6	232.4	232.2	232.0	231.8
137.5°	248.2	248.1	248.1	248.0	247.7	247.5	247.2	246.8
140°	258.6	258.6	258.6	258.4	258.1	257.9	257.6	257.4
142.5°	267.9	267.9	268.0	267.9	267.7	267.3	267.1	266.8
145°	282.1	282.1	282.2	282.1	281.9	281.6	281.4	281.0
147.5°	294.5	294.7	294.9	294.8	294.5	294.3	294.0	293.8
150°	302.5	302.6	302.9	302.9	302.6	302.5	302.3	302.0
152.5°	310.4	310.6	310.9	310.9	310.6	310.4	310.1	309.9
155°	320.4	320.7	321.1	321.2	320.9	320.7	320.6	320.3
157.5°	329.6	330.1	330.5	330.6	330.3	329.9	329.7	329.3
160°	335.1	335.5	336.0	336.0	335.7	335.4	335.2	334.9
162.5°	340.1	340.5	341.0	341.0	340.8	340.4	340.1	339.8
165°	346.5	347.0	347.4	347.5	347.2	346.8	346.5	346.2
167.5°	351.8	352.2	352.8	352.8	352.5	352.1	351.7	351.4
170°	354.7	355.2	355.7	355.7	355.3	354.9	354.5	354.0
172.5°	356.9	357.4	357.8	357.9	357.5	357.1	356.7	356.3
175°	359.3	359.7	360.2	360.2	359.9	359.5	359.0	358.6
177.5°	360.4	360.7	361.0	361.0	360.7	360.4	360.1	359.7
180°	360.5	360.5	360.5	360.5	360.5	360.5	360.5	360.5

(END OF REPORT)