

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: P331337-930

Luminaire Tested: **SA2XXDIP-C675D330U930-4F0-1E-UDD-F1**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331337-930
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-C675D330U930-4F0-1E-UDD-F1
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 675 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 330 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3158.0 lumens
Efficiency: N/A
Efficacy: 90.2 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: Semi-Direct

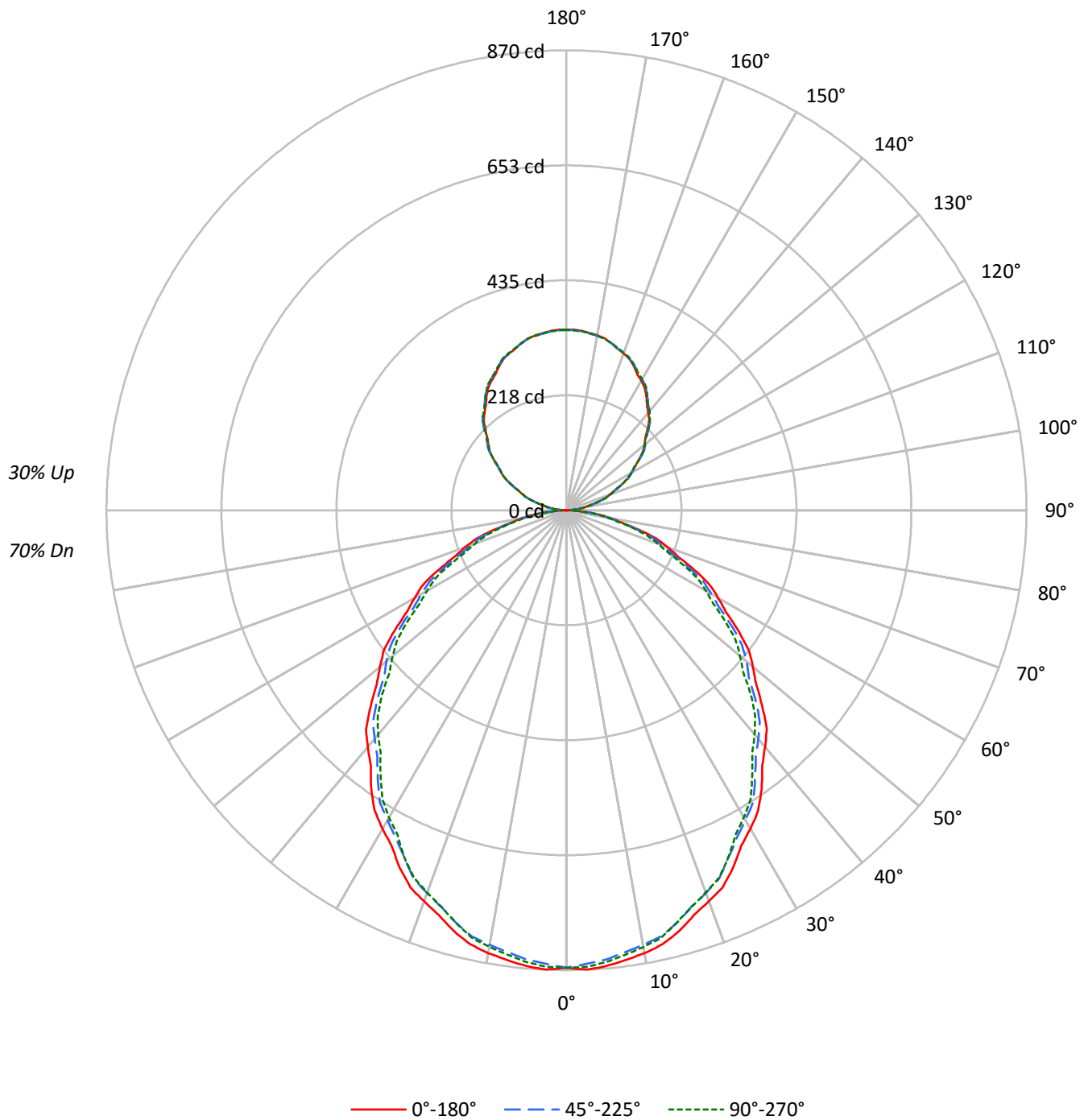
Input Watts (W): 35
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P331337-930

CATALOG NUMBER: SA2XXDIP-C675D330U930-4F0-1E-UDD-F1

Luminous Intensity Polar Plot



TEST NUMBER: P331337-930

CATALOG NUMBER: SA2XXDIP-C675D330U930-4F0-1E-UDD-F1

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	112	112	112	112	106	106	106	106	94	94	94	84	84	84	74	74	74
1	102	98	94	90	96	93	89	86	83	80	78	74	72	70	66	64	63
2	93	85	79	74	88	81	75	70	73	68	64	65	61	58	58	55	53
3	85	75	68	61	80	71	64	59	64	59	54	57	53	50	51	48	45
4	78	67	58	52	73	63	56	50	57	51	46	51	46	43	46	42	39
5	72	59	51	45	67	57	49	43	51	45	40	46	41	37	41	37	34
6	66	53	45	39	62	51	43	38	46	40	35	42	36	32	38	33	30
7	61	48	40	34	58	46	39	33	42	36	31	38	33	29	34	30	27
8	57	44	36	31	54	42	35	30	38	32	28	35	30	26	32	27	24
9	53	40	33	27	50	39	31	27	35	29	25	32	27	23	29	25	22
10	50	37	30	25	47	36	29	24	33	27	23	30	25	21	27	23	20

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13976	13976	13976
5°	14029	13827	13908
10°	13946	13686	13754
15°	13772	13508	13494
20°	13527	13242	13228
25°	13286	12916	12916
30°	12972	12616	12506
35°	12682	12254	12073
40°	12313	11894	11666
45°	11953	11536	11250
50°	11560	11163	10766
55°	11153	10731	10331
60°	10698	10214	9836
65°	10208	9700	9253
70°	9588	9073	8644
75°	8721	8359	8153
80°	7736	7504	7122
85°	6336	6002	5391

TEST NUMBER: P331337-930

CATALOG NUMBER: SA2XXDIP-C675D330U930-4F0-1E-UDD-F1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	81.4	2.6
10°-20°	229.0	7.3
20°-30°	336.6	10.7
30°-40°	391.0	12.4
40°-50°	390.6	12.4
50°-60°	340.6	10.8
60°-70°	251.9	8.0
70°-80°	142.7	4.5
80°-90°	39.7	1.3
90°-100°	21.6	0.7
100°-110°	67.2	2.1
110°-120°	114.8	3.6
120°-130°	151.0	4.8
130°-140°	169.5	5.4
140°-150°	166.2	5.3
150°-160°	139.4	4.4
160°-170°	92.4	2.9
170°-180°	32.3	1.0
0°-30°	647.0	20.5
0°-40°	1038.1	32.9
0°-60°	1769.3	56.0
0°-90°	2203.6	69.8
90°-120°	203.6	6.4
90°-150°	690.3	21.9
90°-180°	954.0	30.2
0°-180°	3158.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	866	866	866	866	866	
5°	866	862	853	859	858	82
15°	824	819	808	811	807	232
25°	746	739	725	726	725	343
35°	643	635	622	617	612	402
45°	524	517	505	496	493	404
55°	396	391	381	372	367	354
65°	267	262	254	247	242	264
75°	140	138	134	129	131	149
85°	34	33	32	30	29	39
90°	0	4	10	10	10	2
95°	15	18	18	18	18	17
105°	62	63	63	64	64	65
115°	115	117	116	116	115	114
125°	168	170	169	168	168	150
135°	217	220	221	220	220	168
145°	263	265	267	267	266	164
155°	301	302	303	304	303	138
165°	328	327	327	329	328	92
175°	341	340	339	341	340	32
180°	341	341	341	341	341	

TEST NUMBER: P331337-930

CATALOG NUMBER: SA2XXDIP-C675D330U930-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	865.6	865.6	865.6	865.6	865.6	865.6	865.6	865.6	865.6	865.6	865.6
2.5°	869.6	868.9	868.1	867.4	866.7	865.4	863.8	862.2	860.5	858.9	860.4
5°	865.6	864.9	864.1	863.4	862.7	861.3	859.2	857.2	855.2	853.1	854.6
7.5°	857.9	856.8	855.7	854.5	853.4	851.7	849.7	847.6	845.5	843.4	844.9
10°	850.6	849.3	848.0	846.7	845.5	843.7	841.5	839.3	837.0	834.8	836.3
12.5°	840.7	839.5	838.3	837.1	836.0	834.4	832.1	829.9	827.7	825.5	826.6
15°	823.9	822.9	821.7	820.7	819.5	817.7	815.4	812.9	810.6	808.1	808.9
17.5°	802.7	801.5	800.5	799.3	798.3	796.5	794.0	791.6	789.1	786.7	787.6
20°	787.3	786.3	785.1	784.0	782.9	781.1	778.4	775.9	773.3	770.7	771.3
22.5°	772.0	770.5	768.9	767.4	765.8	763.9	761.4	759.0	756.5	754.1	754.2
25°	745.8	744.3	742.8	741.3	739.8	737.5	734.3	731.2	728.1	725.0	725.3
27.5°	715.8	714.4	713.1	711.8	710.5	708.6	706.0	703.6	701.1	698.6	698.1
30°	695.8	694.3	692.8	691.4	689.9	687.8	685.0	682.2	679.5	676.7	676.1
32.5°	674.5	673.3	672.1	670.9	669.8	667.7	664.8	661.9	658.9	656.0	655.0
35°	643.4	641.6	639.7	637.8	635.9	633.6	630.6	627.6	624.7	621.7	620.6
37.5°	608.2	606.6	605.0	603.3	601.8	599.4	596.5	593.5	590.6	587.6	586.2
40°	584.2	582.8	581.3	579.8	578.4	576.2	573.2	570.2	567.3	564.3	562.6
42.5°	561.0	559.5	558.0	556.5	555.1	552.9	549.8	546.9	544.0	541.0	539.2
45°	523.5	522.2	520.9	519.7	518.4	516.3	513.6	510.8	508.0	505.2	503.2
47.5°	486.2	485.0	483.8	482.6	481.4	479.3	476.4	473.5	470.7	467.7	465.6
50°	460.2	459.3	458.4	457.5	456.6	454.8	452.2	449.6	447.0	444.4	441.9
52.5°	435.0	433.7	432.5	431.3	430.1	428.3	425.8	423.4	420.9	418.5	416.4
55°	396.2	395.1	394.0	392.8	391.8	390.0	387.8	385.6	383.4	381.2	379.0
57.5°	357.2	356.4	355.5	354.6	353.7	352.0	349.6	347.2	344.7	342.3	340.1
60°	331.3	330.5	329.8	329.1	328.3	326.6	324.1	321.5	318.9	316.3	314.2
62.5°	306.0	304.8	303.6	302.4	301.3	299.6	297.7	295.6	293.7	291.6	289.8
65°	267.2	266.0	265.0	263.8	262.7	261.2	259.4	257.6	255.7	253.9	252.2
67.5°	227.7	226.8	225.9	225.0	224.1	222.9	221.2	219.6	217.9	216.2	214.9
70°	203.1	202.4	201.6	200.9	200.2	198.9	197.2	195.6	194.0	192.2	190.9
72.5°	177.8	177.0	176.3	175.5	174.8	173.9	172.8	171.8	170.7	169.6	168.4
75°	139.8	139.4	139.1	138.7	138.4	137.7	136.8	135.8	134.9	134.0	132.9
77.5°	105.9	105.3	104.6	104.0	103.4	102.9	102.5	102.1	101.7	101.3	100.9
80°	83.2	83.1	82.8	82.7	82.5	82.2	81.9	81.4	81.1	80.7	80.1
82.5°	62.0	61.9	61.9	61.8	61.8	61.6	61.4	61.2	61.0	60.7	60.1
85°	34.2	33.9	33.8	33.6	33.3	33.2	33.0	32.9	32.6	32.4	31.9
87.5°	12.1	11.9	11.7	11.6	11.5	11.4	11.4	11.3	11.3	11.3	10.8
90°	0.3	1.1	1.8	2.6	3.3	4.5	5.9	7.3	8.6	10.1	9.9
92.5°	5.1	5.7	6.3	6.8	7.4	7.8	8.2	8.5	8.8	9.1	9.2
95°	15.0	15.7	16.2	16.9	17.5	17.9	18.0	18.2	18.3	18.4	18.4
97.5°	27.4	28.0	28.5	29.0	29.6	30.0	30.2	30.5	30.7	31.0	31.0
100°	36.6	37.1	37.6	38.2	38.6	39.0	39.1	39.4	39.5	39.8	39.8
102.5°	46.2	46.6	47.0	47.5	47.9	48.3	48.4	48.7	48.9	49.2	49.2
105°	62.0	62.1	62.3	62.5	62.7	62.9	63.0	63.1	63.3	63.3	63.5
107.5°	77.7	78.0	78.3	78.6	78.8	79.0	79.0	79.0	79.0	79.0	79.0
110°	87.9	88.2	88.6	89.0	89.4	89.6	89.6	89.6	89.6	89.6	89.6

TEST NUMBER: P331337-930

CATALOG NUMBER: SA2XXDIP-C675D330U930-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	98.9	99.3	99.7	100.0	100.4	100.6	100.5	100.5	100.4	100.4	100.3
115°	115.2	115.6	116.0	116.3	116.8	116.9	116.8	116.6	116.5	116.3	116.3
117.5°	131.4	132.0	132.5	133.0	133.5	133.6	133.2	132.9	132.5	132.2	132.0
120°	142.3	142.8	143.3	143.8	144.3	144.3	143.8	143.3	142.8	142.3	142.3
122.5°	152.2	152.8	153.4	154.0	154.7	154.8	154.4	154.1	153.7	153.4	153.2
125°	167.6	168.2	168.8	169.3	169.9	170.2	169.9	169.7	169.6	169.3	169.2
127.5°	182.7	183.4	184.2	184.8	185.6	185.8	185.6	185.4	185.2	184.9	184.7
130°	192.2	193.0	193.8	194.6	195.4	195.8	195.7	195.6	195.4	195.3	195.2
132.5°	202.8	203.4	204.1	204.7	205.5	205.8	205.8	205.9	205.9	205.9	205.6
135°	216.9	217.6	218.3	219.0	219.7	220.1	220.3	220.4	220.5	220.6	220.5
137.5°	231.8	232.4	232.9	233.6	234.2	234.5	234.6	234.8	235.0	235.1	235.1
140°	240.8	241.4	242.0	242.6	243.1	243.5	243.9	244.2	244.5	244.8	244.8
142.5°	250.1	250.6	251.2	251.8	252.3	252.7	252.9	253.2	253.4	253.6	253.6
145°	263.3	263.7	264.2	264.6	265.1	265.5	265.9	266.3	266.6	267.0	267.1
147.5°	275.1	275.7	276.1	276.7	277.2	277.6	277.9	278.2	278.4	278.7	278.8
150°	283.2	283.6	283.9	284.3	284.7	285.0	285.3	285.5	285.8	286.0	286.3
152.5°	290.3	290.7	291.1	291.5	291.8	292.2	292.4	292.8	293.1	293.4	293.7
155°	301.0	301.2	301.4	301.6	301.7	302.0	302.1	302.3	302.6	302.7	303.0
157.5°	310.1	310.3	310.4	310.5	310.7	310.8	311.0	311.0	311.1	311.3	311.7
160°	315.7	315.8	315.9	316.1	316.2	316.3	316.3	316.4	316.5	316.6	316.9
162.5°	320.7	320.8	320.8	320.8	320.9	320.9	321.0	321.1	321.1	321.1	321.6
165°	327.5	327.4	327.3	327.3	327.3	327.2	327.2	327.2	327.2	327.2	327.7
167.5°	333.1	333.0	332.8	332.6	332.4	332.3	332.2	332.2	332.2	332.2	332.6
170°	336.1	336.0	335.7	335.6	335.4	335.3	335.2	335.1	335.1	335.0	335.4
172.5°	338.2	338.0	337.9	337.6	337.5	337.3	337.3	337.2	337.1	337.0	337.5
175°	340.8	340.6	340.4	340.1	340.0	339.8	339.7	339.6	339.4	339.3	339.7
177.5°	341.8	341.6	341.4	341.4	341.2	341.0	341.0	340.9	340.7	340.6	341.0
180°	341.4	341.4	341.4	341.4	341.4	341.4	341.4	341.4	341.4	341.4	341.4

TEST NUMBER: P331337-930

CATALOG NUMBER: SA2XXDIP-C675D330U930-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	865.6	865.6	865.6	865.6	865.6	865.6	865.6	865.6
2.5°	861.9	863.4	864.9	865.4	865.1	864.9	864.5	864.3
5°	856.1	857.5	859.0	859.6	859.2	858.8	858.5	858.1
7.5°	846.4	847.9	849.4	849.9	849.5	849.1	848.7	848.3
10°	837.7	839.3	840.7	841.1	840.7	840.1	839.5	838.9
12.5°	827.5	828.6	829.6	829.9	829.5	829.2	828.8	828.3
15°	809.7	810.4	811.1	811.1	810.1	809.2	808.3	807.3
17.5°	788.4	789.2	790.1	790.1	789.2	788.3	787.4	786.5
20°	771.8	772.4	772.9	772.8	772.1	771.4	770.6	769.9
22.5°	754.3	754.4	754.5	754.3	753.9	753.4	753.0	752.6
25°	725.7	726.0	726.4	726.4	726.0	725.7	725.3	725.0
27.5°	697.5	697.0	696.4	695.7	694.8	693.9	693.0	692.1
30°	675.6	675.0	674.4	673.8	673.0	672.3	671.6	670.8
32.5°	654.0	653.1	652.0	651.2	650.4	649.7	648.9	648.2
35°	619.5	618.4	617.3	616.3	615.4	614.4	613.5	612.5
37.5°	584.9	583.5	582.1	581.0	580.1	579.2	578.4	577.5
40°	561.0	559.3	557.7	556.4	555.7	555.0	554.2	553.5
42.5°	537.4	535.6	533.8	532.3	531.2	530.3	529.2	528.2
45°	501.2	499.1	497.1	495.7	495.0	494.2	493.5	492.7
47.5°	463.5	461.3	459.2	457.5	456.5	455.4	454.4	453.3
50°	439.3	436.7	434.1	432.4	431.4	430.5	429.6	428.6
52.5°	414.2	412.1	409.9	408.2	407.0	405.8	404.6	403.3
55°	376.7	374.5	372.3	370.7	369.8	368.9	367.9	367.0
57.5°	337.9	335.7	333.5	332.1	331.3	330.7	330.0	329.2
60°	312.2	310.1	308.1	306.9	306.3	305.7	305.2	304.6
62.5°	287.9	286.0	284.1	282.8	282.1	281.4	280.7	280.0
65°	250.5	248.8	247.2	245.9	245.0	244.0	243.1	242.2
67.5°	213.6	212.4	211.1	210.0	209.3	208.6	207.8	207.1
70°	189.6	188.4	187.1	186.1	185.3	184.6	183.8	183.1
72.5°	167.1	165.8	164.4	163.5	162.9	162.3	161.8	161.1
75°	131.8	130.7	129.6	129.2	129.6	130.0	130.3	130.7
77.5°	100.3	99.7	99.1	98.7	98.1	97.6	97.1	96.5
80°	79.7	79.1	78.5	78.0	77.7	77.3	77.0	76.6
82.5°	59.4	58.6	58.0	57.6	57.5	57.4	57.3	57.2
85°	31.4	30.8	30.2	29.8	29.7	29.5	29.4	29.1
87.5°	10.4	9.9	9.5	9.1	9.0	8.9	8.7	8.6
90°	9.9	9.7	9.5	9.5	9.6	9.7	9.7	9.8
92.5°	9.2	9.2	9.3	9.3	9.3	9.3	9.3	9.3
95°	18.4	18.4	18.4	18.3	18.3	18.1	18.0	17.9
97.5°	31.0	31.0	31.0	31.0	31.0	31.0	31.0	30.9
100°	39.8	39.8	39.8	39.7	39.6	39.6	39.5	39.5
102.5°	49.3	49.3	49.4	49.4	49.3	49.2	49.2	49.2
105°	63.6	63.8	63.9	63.9	63.9	63.9	63.9	63.9
107.5°	79.1	79.2	79.2	79.1	78.8	78.5	78.2	77.9
110°	89.6	89.6	89.6	89.5	89.3	89.1	88.9	88.7

TEST NUMBER: P331337-930

CATALOG NUMBER: SA2XXDIP-C675D330U930-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	100.1	100.0	99.8	99.6	99.5	99.4	99.2	99.1
115°	116.3	116.2	116.1	116.0	115.8	115.6	115.4	115.2
117.5°	131.8	131.7	131.5	131.3	131.2	131.0	130.8	130.6
120°	142.3	142.3	142.3	142.2	142.0	141.8	141.6	141.5
122.5°	153.0	152.9	152.7	152.6	152.5	152.3	152.1	152.1
125°	169.0	168.8	168.6	168.4	168.4	168.4	168.3	168.2
127.5°	184.5	184.3	184.0	183.8	183.6	183.4	183.2	183.0
130°	195.0	194.9	194.8	194.6	194.4	194.0	193.8	193.6
132.5°	205.3	205.0	204.8	204.6	204.3	204.2	203.9	203.7
135°	220.5	220.5	220.4	220.3	220.0	219.9	219.7	219.5
137.5°	235.1	235.0	235.0	234.8	234.6	234.3	234.1	233.7
140°	244.8	244.8	244.8	244.7	244.4	244.2	243.9	243.7
142.5°	253.7	253.7	253.8	253.7	253.5	253.2	252.9	252.7
145°	267.2	267.2	267.3	267.2	266.9	266.7	266.4	266.1
147.5°	278.9	279.1	279.2	279.2	278.9	278.7	278.4	278.2
150°	286.4	286.6	286.8	286.8	286.6	286.4	286.3	286.0
152.5°	293.9	294.2	294.4	294.4	294.2	293.9	293.7	293.4
155°	303.4	303.7	304.0	304.1	303.9	303.7	303.5	303.3
157.5°	312.1	312.6	313.0	313.1	312.7	312.4	312.2	311.9
160°	317.3	317.7	318.1	318.1	317.9	317.6	317.4	317.2
162.5°	322.0	322.5	322.9	322.9	322.7	322.4	322.0	321.7
165°	328.1	328.6	329.0	329.1	328.7	328.4	328.1	327.8
167.5°	333.1	333.5	334.0	334.1	333.8	333.4	333.0	332.7
170°	335.9	336.3	336.8	336.8	336.5	336.1	335.7	335.3
172.5°	337.9	338.4	338.8	338.9	338.5	338.1	337.8	337.4
175°	340.2	340.6	341.1	341.1	340.8	340.4	340.0	339.6
177.5°	341.3	341.5	341.9	341.9	341.5	341.3	341.0	340.6
180°	341.4	341.4	341.4	341.4	341.4	341.4	341.4	341.4

(END OF REPORT)