

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: P331334-840

Luminaire Tested: **SA2XXDIP-C675D330U840-4F0-1E-UDD-D1**

Issue Date: 10/7/2019

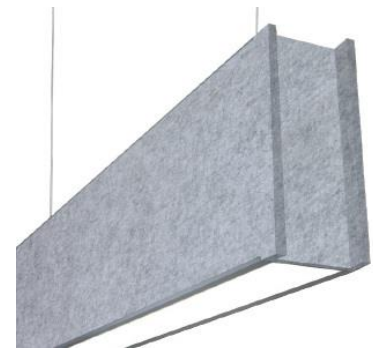
Test Information

Test Method: LM-79-08
Report Number: P331334-840
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-C675D330U840-4F0-1E-UDD-D1
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 675 LUMENS PER FOOT, DROP 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: 3897.7 lumens
Efficiency: N/A
Efficacy: 111.4 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-Direct

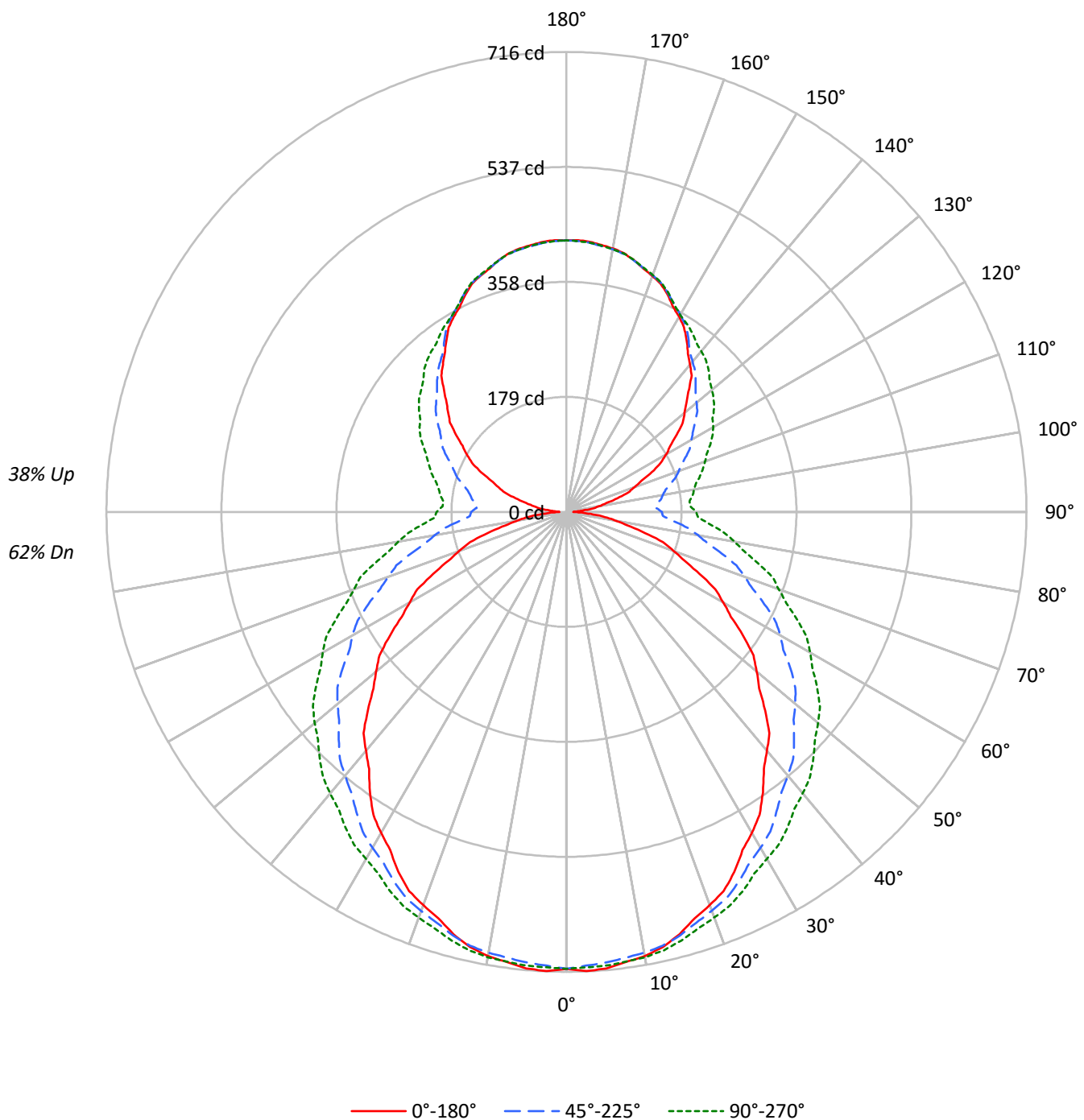
Input Watts (W): 35
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P331334-840

CATALOG NUMBER: SA2XXDIP-C675D330U840-4F0-1E-UDD-D1

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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	110	110	110	110	103	103	103	103	90	90	90	78	78	78	67	67	67
1	99	93	89	84	92	87	83	80	76	73	70	66	63	61	56	55	53
2	89	81	73	68	83	75	69	64	66	61	57	57	53	50	49	46	43
3	81	70	62	55	75	66	58	52	57	52	47	50	45	41	42	39	36
4	74	62	53	46	68	58	50	44	51	44	39	44	39	35	38	34	30
5	67	55	46	39	63	51	44	38	45	39	34	39	34	30	34	30	26
6	62	49	40	34	58	46	38	32	41	34	29	35	30	26	30	26	23
7	57	44	36	30	53	42	34	28	37	30	26	32	27	23	28	23	20
8	53	40	32	26	50	38	30	25	33	27	23	29	24	20	25	21	18
9	50	37	29	23	46	35	27	22	31	25	20	27	22	18	23	19	16
10	46	34	26	21	43	32	25	20	28	22	18	25	20	16	22	18	15

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: P331334-840

CATALOG NUMBER: SA2XXDIP-C675D330U840-4F0-1E-UDD-D1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	67.4	1.7
10°-20°	193.3	5.0
20°-30°	292.9	7.5
30°-40°	356.7	9.2
40°-50°	383.8	9.8
50°-60°	372.7	9.6
60°-70°	325.4	8.3
70°-80°	250.5	6.4
80°-90°	169.8	4.4
90°-100°	142.6	3.7
100°-110°	167.8	4.3
110°-120°	198.1	5.1
120°-130°	218.2	5.6
130°-140°	223.0	5.7
140°-150°	208.1	5.3
150°-160°	172.7	4.4
160°-170°	114.5	2.9
170°-180°	40.0	1.0
0°-30°	553.6	14.2
0°-40°	910.3	23.4
0°-60°	1666.8	42.8
0°-90°	2412.7	61.9
90°-120°	508.5	13.0
90°-150°	1157.9	29.7
90°-180°	1485.0	38.1
0°-180°	3897.7	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	75	149	188	202	8
95°	27	79	141	179	192	28
105°	82	114	167	203	215	87
115°	147	162	206	235	247	145
125°	210	215	245	271	280	188
135°	270	274	285	305	313	209
145°	326	329	331	337	341	204
155°	373	374	375	377	376	172
165°	406	405	405	408	406	114
175°	422	421	420	422	421	40
180°	423	423	423	423	423	

TEST NUMBER: P331334-840

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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	34.1	48.0	61.8	75.6	90.1	105.1	120.1	135.1	150.2	159.5
90°	10.7	24.9	39.2	53.4	67.7	82.9	99.4	115.7	132.2	148.6	157.5
92.5°	15.9	28.9	42.0	55.0	68.1	81.9	96.4	111.0	125.5	140.0	149.1
95°	26.8	38.4	49.9	61.5	73.0	85.7	99.7	113.6	127.4	141.4	150.1
97.5°	41.1	51.4	61.7	71.9	82.2	94.1	107.6	121.1	134.6	148.0	156.5
100°	52.5	61.6	70.8	79.9	89.0	100.1	113.1	126.2	139.3	152.3	160.8
102.5°	63.7	71.9	80.2	88.5	96.7	107.2	120.0	132.7	145.5	158.2	166.6
105°	81.9	88.8	95.6	102.5	109.4	118.9	131.0	143.0	155.1	167.1	175.3
107.5°	101.2	106.8	112.5	118.2	123.9	132.4	143.8	155.2	166.6	178.0	185.8
110°	112.9	118.0	123.1	128.2	133.2	141.3	152.6	163.8	175.0	186.2	193.6



TEST NUMBER: P331334-840

CATALOG NUMBER: SA2XXDIP-C675D330U840-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	126.6	131.0	135.3	139.7	143.9	151.4	162.0	172.6	183.3	193.9	201.0
115°	146.8	149.9	152.8	155.8	158.9	165.4	175.5	185.7	195.8	206.0	212.8
117.5°	165.9	168.2	170.5	172.8	175.1	180.8	189.9	198.9	208.0	217.1	223.7
120°	179.4	180.9	182.5	184.0	185.5	190.6	199.1	207.6	216.2	224.7	231.2
122.5°	191.6	192.8	193.9	195.0	196.1	200.8	208.9	217.1	225.3	233.5	239.5
125°	209.7	210.5	211.2	211.9	212.6	216.5	223.6	230.7	237.7	244.8	250.7
127.5°	228.3	229.0	229.6	230.4	231.1	234.2	239.8	245.4	251.1	256.7	262.1
130°	240.0	240.9	241.7	242.5	243.3	246.0	250.6	255.3	259.9	264.6	269.9
132.5°	253.2	253.8	254.4	255.0	255.6	257.8	261.6	265.3	269.0	272.8	277.7
135°	269.7	270.5	271.5	272.3	273.2	274.9	277.3	279.7	282.2	284.7	289.3
137.5°	288.2	288.8	289.5	290.1	290.8	291.8	293.0	294.2	295.4	296.6	300.8
140°	299.3	299.8	300.2	300.7	301.2	301.9	302.8	303.7	304.5	305.3	309.0
142.5°	310.7	311.2	311.6	312.1	312.7	313.1	313.5	313.8	314.2	314.6	317.5
145°	326.1	326.7	327.2	327.8	328.3	328.8	329.3	329.8	330.2	330.7	332.1
147.5°	340.7	341.4	342.0	342.7	343.4	343.9	344.2	344.6	344.9	345.2	345.5
150°	350.7	351.2	351.6	352.1	352.6	353.0	353.4	353.7	354.0	354.3	354.6
152.5°	359.6	360.0	360.5	361.0	361.4	361.9	362.2	362.6	363.0	363.5	363.8
155°	372.8	373.0	373.3	373.5	373.8	374.1	374.3	374.5	374.8	375.0	375.4
157.5°	384.2	384.4	384.5	384.7	384.9	385.0	385.2	385.3	385.4	385.6	386.1
160°	391.0	391.2	391.3	391.5	391.6	391.8	391.8	391.9	392.0	392.1	392.5
162.5°	397.3	397.4	397.4	397.4	397.5	397.5	397.6	397.7	397.8	397.8	398.4
165°	405.7	405.6	405.5	405.5	405.4	405.3	405.3	405.3	405.3	405.3	405.9
167.5°	412.6	412.4	412.2	411.9	411.7	411.6	411.5	411.5	411.5	411.5	412.0
170°	416.4	416.2	415.9	415.7	415.5	415.3	415.2	415.1	415.1	415.0	415.5
172.5°	418.9	418.7	418.5	418.2	418.0	417.8	417.8	417.7	417.6	417.5	418.1
175°	422.1	421.8	421.6	421.3	421.1	420.9	420.8	420.6	420.4	420.3	420.8
177.5°	423.3	423.1	422.9	422.8	422.6	422.4	422.3	422.2	422.0	421.9	422.3
180°	422.8	422.8	422.8	422.8	422.8	422.8	422.8	422.8	422.8	422.8	422.8

TEST NUMBER: P331334-840

CATALOG NUMBER: SA2XXDIP-C675D330U840-4F0-1E-UDD-D1

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°	168.7	178.0	187.4	193.5	196.4	199.4	202.4	205.3
90°	166.6	175.6	184.6	190.5	193.3	196.1	198.9	201.8
92.5°	158.0	167.0	176.0	182.0	184.7	187.4	190.3	193.0
95°	158.9	167.5	176.2	181.9	184.4	187.0	189.7	192.2
97.5°	165.0	173.5	182.0	187.5	190.3	193.0	195.6	198.3
100°	169.3	177.7	186.2	191.7	194.1	196.6	199.0	201.5
102.5°	175.0	183.3	191.7	197.1	199.5	202.0	204.4	206.8
105°	183.5	191.7	199.9	205.2	207.7	210.3	212.8	215.3
107.5°	193.6	201.4	209.0	214.0	216.2	218.3	220.6	222.7
110°	200.9	208.2	215.5	220.4	222.7	224.9	227.2	229.4

TEST NUMBER: P331334-840

CATALOG NUMBER: SA2XXDIP-C675D330U840-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	208.1	215.3	222.4	227.1	229.5	231.9	234.2	236.5
115°	219.5	226.4	233.2	237.7	239.9	242.3	244.6	246.8
117.5°	230.2	236.9	243.5	247.8	249.9	252.0	254.1	256.2
120°	237.5	244.0	250.3	254.7	257.0	259.2	261.6	263.9
122.5°	245.5	251.6	257.6	261.7	263.6	265.6	267.6	269.5
125°	256.7	262.7	268.6	272.6	274.6	276.6	278.5	280.5
127.5°	267.5	272.9	278.3	281.9	283.6	285.4	287.1	288.9
130°	275.3	280.6	285.9	289.3	290.8	292.4	293.9	295.4
132.5°	282.7	287.7	292.7	295.9	297.5	299.0	300.6	302.3
135°	294.1	298.8	303.6	306.7	308.3	309.9	311.5	313.1
137.5°	305.0	309.1	313.3	316.0	317.2	318.4	319.6	320.9
140°	312.7	316.3	320.0	322.3	323.5	324.5	325.5	326.6
142.5°	320.5	323.6	326.5	328.4	329.3	330.2	331.0	331.9
145°	333.7	335.1	336.6	337.7	338.5	339.3	340.2	341.0
147.5°	345.9	346.2	346.6	346.9	347.1	347.4	347.6	347.9
150°	354.8	355.0	355.3	355.3	355.0	354.8	354.6	354.3
152.5°	364.1	364.4	364.7	364.7	364.4	364.1	363.8	363.5
155°	375.8	376.2	376.6	376.7	376.4	376.2	376.0	375.7
157.5°	386.6	387.2	387.7	387.8	387.4	387.0	386.7	386.3
160°	393.0	393.5	394.0	394.0	393.7	393.4	393.1	392.8
162.5°	398.9	399.4	400.0	400.0	399.7	399.3	398.9	398.5
165°	406.4	407.0	407.5	407.6	407.2	406.8	406.4	406.1
167.5°	412.6	413.1	413.7	413.8	413.4	412.9	412.5	412.1
170°	416.1	416.6	417.2	417.2	416.8	416.3	415.8	415.3
172.5°	418.6	419.2	419.7	419.8	419.3	418.8	418.4	417.9
175°	421.4	421.9	422.5	422.5	422.1	421.6	421.1	420.6
177.5°	422.7	423.0	423.4	423.4	423.0	422.7	422.3	421.9
180°	422.8	422.8	422.8	422.8	422.8	422.8	422.8	422.8

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