

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: SHAPER

Report Number: P368736

Luminaire Tested: **674-W-31-L3/830**

Issue Date: 11/13/2019

Test Information

Test Method: LM-79-08
Report Number: P368736
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1804-721-12)
Test Lab: INNOVATIONS CENTER
Issue Date: 11/13/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: SHAPER
Catalog Number: 674-W-31-L3/830
Description: 31" 674 SERIES LUMINOUS WALL SCONCE
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

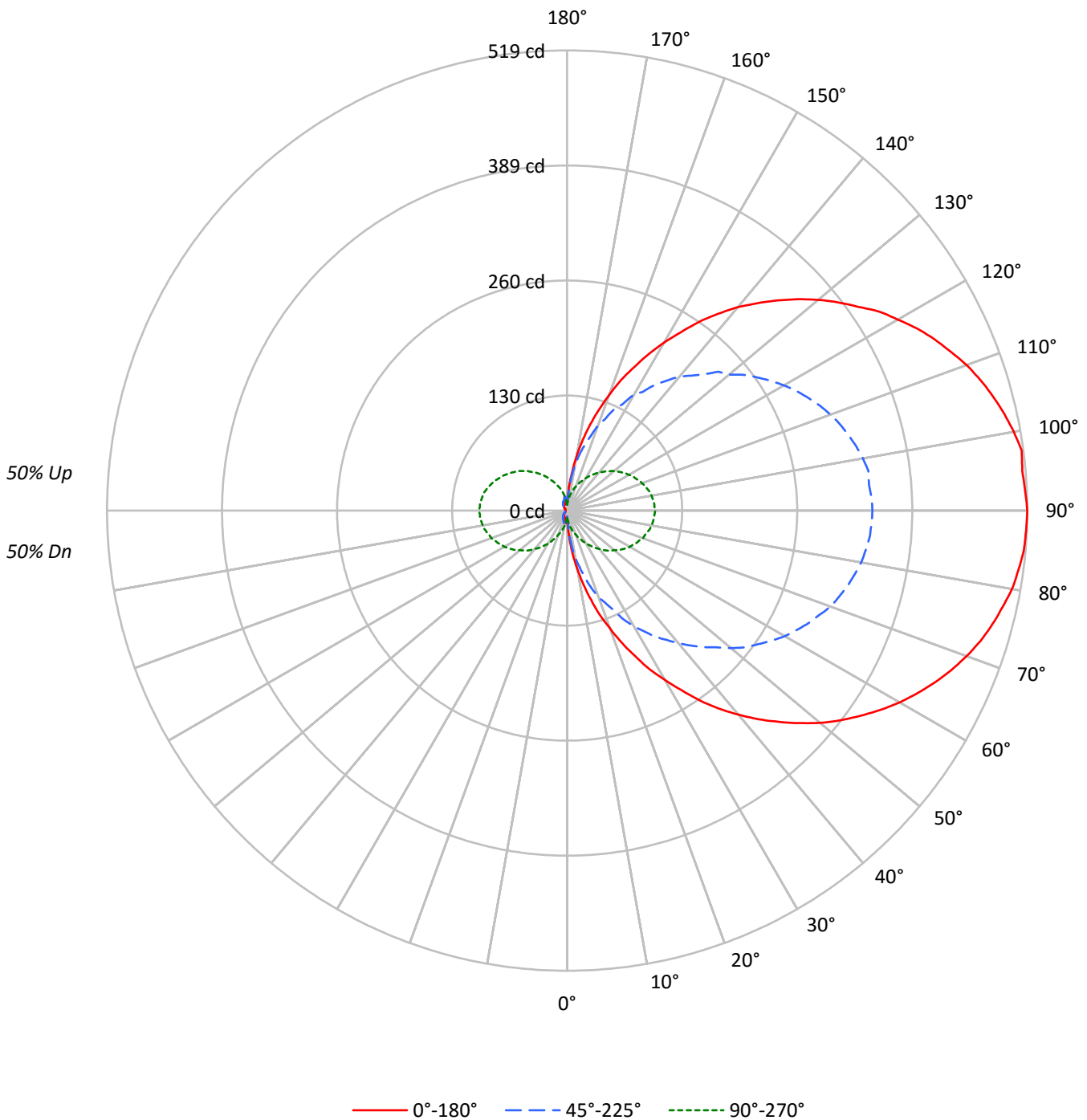
Lumens per Lamp: N/A
Luminaire Lumens: 1660.7 lumens
Efficiency: N/A
Efficacy: 78.3 lumens/watt
Spacing Criteria (0/90/45): 8.23 / 5.71 / 6.45
Luminous Opening: Rectangular w/ Sides (W: 0.71' x L: 0.21' x H: 2.58')
CIE Type: General Diffuse

Input Watts (W): 21.2
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



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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	0
RCR																		
0	107	107	107	107	99	99	99	99	83	83	83	69	69	69	56	56	56	50
1	92	85	79	74	84	78	72	68	64	60	56	52	49	46	40	38	36	30
2	81	71	63	55	74	65	57	51	53	47	42	42	38	34	32	29	26	21
3	73	61	51	44	66	55	47	40	45	38	33	36	30	26	27	23	20	15
4	66	53	43	35	60	48	39	32	39	32	27	31	25	21	23	19	15	11
5	60	46	36	29	54	42	33	27	34	27	22	27	21	17	20	16	12	9
6	55	41	31	24	50	37	29	22	30	23	18	24	18	14	18	14	10	7
7	50	36	27	21	46	33	25	19	27	20	16	21	16	12	16	12	9	6
8	47	33	24	18	42	30	22	16	24	18	13	19	14	10	15	10	7	5
9	43	30	21	16	39	27	19	14	22	16	12	18	13	9	13	9	6	4
10	40	27	19	14	37	25	17	12	20	14	10	16	11	8	12	8	6	3

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	481	481	481
5°	1152	677	495
10°	1571	802	284
15°	1820	898	164
20°	1995	971	118
25°	2149	1064	89
30°	2277	1172	68
35°	2408	1245	61
40°	2507	1320	47
45°	2593	1416	29
50°	2680	1475	20
55°	2743	1557	19
60°	2808	1629	12
65°	2865	1689	12
70°	2917	1761	12
75°	2960	1811	11
80°	3001	1873	11
85°	3032	1931	11



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	2.3	0.1
10°-20°	12.8	0.8
20°-30°	31.6	1.9
30°-40°	57.6	3.5
40°-50°	88.4	5.3
50°-60°	121.3	7.3
60°-70°	152.1	9.2
70°-80°	176.1	10.6
80°-90°	189.3	11.4
90°-100°	189.5	11.4
100°-110°	176.4	10.6
110°-120°	151.7	9.1
120°-130°	120.7	7.3
130°-140°	88.0	5.3
140°-150°	57.2	3.4
150°-160°	31.2	1.9
160°-170°	12.5	0.8
170°-180°	2.1	0.1
0°-30°	46.7	2.8
0°-40°	104.2	6.3
0°-60°	313.9	18.9
0°-90°	831.4	50.1
90°-120°	517.6	31.2
90°-150°	783.6	47.2
90°-180°	829.0	49.9
0°-180°	1660.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	7	7	7	7	7	
5°	33	28	12	15	14	4
15°	104	79	24	14	9	31
25°	181	124	36	10	8	85
35°	262	174	50	8	7	165
45°	337	218	64	6	4	262
55°	404	263	76	4	3	362
65°	458	300	86	3	2	454
75°	496	328	94	2	2	525
85°	517	343	98	2	2	421
90°	519	344	100	2	2	284
95°	515	342	98	2	2	421
105°	497	328	94	2	2	526
115°	457	300	85	3	2	453
125°	401	262	75	4	3	360
135°	335	217	63	6	4	260
145°	260	174	49	8	7	164
155°	178	127	36	10	8	84
165°	100	76	22	13	9	30
175°	29	26	11	14	13	4
180°	7	7	7	7	7	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6
2.5°	17.8	16.0	15.0	15.0	15.0	14.1	12.2	10.3	9.4	9.4	9.4
5°	32.8	33.8	35.7	34.7	32.8	28.2	21.6	17.8	15.0	12.2	12.2
7.5°	50.7	52.6	54.4	52.6	47.9	41.3	32.8	26.3	21.6	16.9	15.0
10°	67.6	68.5	73.2	70.4	62.9	55.4	44.1	33.8	26.3	19.7	17.8
12.5°	85.4	85.4	91.0	86.3	77.9	65.7	54.4	42.2	31.9	23.5	20.6
15°	104.2	104.2	108.9	103.2	92.0	78.8	63.8	49.7	37.5	27.2	23.5
17.5°	123.9	122.0	126.7	122.0	107.0	92.0	74.1	57.2	44.1	31.0	26.3
20°	141.7	141.7	147.3	137.0	121.1	104.2	83.5	65.7	49.7	35.7	29.1
22.5°	161.4	160.5	158.6	156.7	138.9	112.6	93.9	73.2	54.4	39.4	32.8
25°	181.1	180.2	179.3	162.4	147.3	123.9	106.1	77.9	62.9	44.1	35.7
27.5°	201.8	199.9	199.0	183.0	164.2	138.9	112.6	88.2	68.5	47.9	39.4
30°	220.6	217.7	216.8	200.8	175.5	150.2	122.0	93.9	76.0	52.6	43.2
32.5°	240.3	237.4	231.8	213.0	190.5	161.4	131.4	102.3	79.8	57.2	46.0
35°	261.8	259.0	252.5	229.9	204.6	173.6	142.7	109.8	86.3	61.9	49.7
37.5°	281.6	278.7	269.4	252.5	221.5	183.9	150.2	118.3	91.0	65.7	53.5
40°	300.3	298.4	283.4	260.9	228.1	195.2	159.5	125.8	97.6	70.4	56.3
42.5°	319.1	316.3	300.3	277.8	246.8	206.5	168.9	135.1	104.2	74.1	60.1
45°	336.9	334.1	318.2	292.8	259.0	217.7	176.4	138.9	109.8	78.8	63.8
47.5°	354.8	351.9	334.1	307.8	272.2	228.1	184.9	145.5	115.4	82.6	66.6
50°	372.6	368.8	351.0	323.8	285.3	241.2	192.4	153.0	122.0	87.3	69.5
52.5°	388.5	385.7	367.0	337.9	298.4	253.4	200.8	160.5	126.7	91.0	73.2
55°	403.6	399.8	380.1	351.0	310.6	262.8	209.3	166.1	131.4	94.8	76.0
57.5°	418.6	414.8	395.1	363.2	322.9	273.1	217.7	172.7	136.1	97.6	78.8
60°	432.7	428.9	408.3	376.3	333.2	283.4	225.2	178.3	140.8	101.4	81.7
62.5°	445.8	442.0	421.4	387.6	344.4	291.9	232.8	184.9	145.5	105.1	83.5
65°	458.0	453.3	431.7	398.9	353.8	300.3	241.2	189.6	150.2	107.9	86.3
67.5°	469.3	465.5	443.0	409.2	363.2	307.8	247.8	195.2	153.9	110.7	88.2
70°	479.6	475.8	453.3	417.6	372.6	316.3	254.3	199.9	157.7	113.6	91.0
72.5°	489.0	484.3	461.8	426.1	379.2	321.9	260.0	203.7	161.4	115.4	92.0
75°	496.5	491.8	468.3	433.6	385.7	327.5	263.7	207.4	164.2	118.3	93.9
77.5°	503.0	498.4	475.8	439.2	391.4	332.2	267.5	210.2	167.1	119.2	95.7
80°	509.6	504.0	481.5	444.9	396.1	336.9	271.2	213.0	168.9	121.1	96.7
82.5°	513.4	508.7	485.2	448.6	399.8	339.7	274.0	214.9	170.8	122.0	97.6
85°	517.1	511.5	488.0	451.4	402.6	342.6	275.9	216.8	171.7	122.9	98.5
87.5°	518.1	513.4	490.8	453.3	403.6	343.5	276.9	217.7	172.7	123.9	98.5
90°	519.0	514.3	490.8	454.2	404.5	344.4	277.8	217.7	172.7	123.9	99.5
92.5°	517.1	512.4	489.0	452.4	403.6	343.5	276.9	217.7	171.7	123.9	98.5
95°	515.2	510.6	487.1	450.5	401.7	341.6	275.0	215.9	170.8	122.9	98.5
97.5°	517.1	512.4	489.0	451.4	402.6	342.6	275.9	215.9	170.8	122.9	97.6
100°	511.5	506.8	484.3	446.7	397.9	338.8	273.1	214.0	168.9	121.1	96.7
102.5°	504.9	500.2	477.7	441.1	392.3	334.1	269.4	211.2	167.1	119.2	95.7
105°	497.4	492.7	470.2	433.6	385.7	328.5	264.7	207.4	164.2	117.3	93.9
107.5°	489.0	485.2	462.7	427.0	379.2	322.9	260.0	203.7	161.4	115.4	92.0
110°	479.6	475.8	453.3	417.6	371.7	316.3	254.3	199.0	157.7	112.6	90.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
112.5°	468.3	464.6	443.0	408.3	362.3	308.8	247.8	194.3	153.9	109.8	88.2
115°	457.1	453.3	431.7	397.9	353.8	300.3	239.3	189.6	150.2	107.0	85.4
117.5°	444.9	441.1	420.5	387.6	343.5	291.9	231.8	183.9	145.5	104.2	83.5
120°	430.8	427.0	407.3	375.4	332.2	282.5	224.3	178.3	140.8	100.4	80.7
122.5°	417.6	413.9	394.2	362.3	321.0	272.2	216.8	171.7	136.1	97.6	77.9
125°	400.7	397.9	379.2	349.1	308.8	261.8	208.4	165.2	130.5	93.9	75.1
127.5°	385.7	382.9	364.1	336.0	296.6	251.5	199.9	158.6	125.8	90.1	72.3
130°	369.8	367.9	350.1	321.9	284.4	238.4	191.5	152.0	120.1	86.3	69.5
132.5°	352.9	351.0	333.2	306.9	271.2	231.8	182.1	147.3	114.5	81.7	65.7
135°	335.1	333.2	316.3	290.9	258.1	216.8	174.6	138.9	109.8	77.9	62.9
137.5°	317.2	315.3	301.3	279.7	247.8	206.5	165.2	130.5	103.2	74.1	59.1
140°	299.4	297.5	285.3	260.0	228.1	197.1	153.9	125.8	96.7	69.5	56.3
142.5°	279.7	278.7	269.4	246.8	214.9	184.9	146.4	117.3	92.0	64.8	52.6
145°	260.0	259.0	251.5	231.8	204.6	173.6	136.1	108.9	84.5	60.1	48.8
147.5°	238.4	237.4	233.7	212.1	187.7	158.6	129.5	103.2	78.8	56.3	46.0
150°	218.7	217.7	216.8	199.9	176.4	152.0	119.2	93.9	72.3	52.6	42.2
152.5°	199.0	198.0	197.1	182.1	161.4	135.1	109.8	89.2	66.6	47.9	38.5
155°	178.3	177.4	181.1	165.2	145.5	126.7	99.5	82.6	61.0	43.2	35.7
157.5°	159.5	158.6	159.5	145.5	128.6	111.7	91.0	72.3	55.4	39.4	31.9
160°	138.9	138.9	144.5	134.2	118.3	102.3	81.7	64.8	47.9	34.7	29.1
162.5°	119.2	119.2	125.8	116.4	104.2	88.2	72.3	56.3	42.2	31.0	26.3
165°	100.4	100.4	108.9	100.4	89.2	76.0	61.9	46.9	36.6	27.2	22.5
167.5°	81.7	81.7	89.2	84.5	75.1	65.7	51.6	41.3	31.0	23.5	19.7
170°	63.8	63.8	69.5	67.6	59.1	52.6	43.2	32.8	25.3	18.8	16.9
172.5°	45.0	47.9	52.6	50.7	44.1	39.4	31.9	24.4	20.6	15.0	14.1
175°	29.1	30.0	32.8	32.8	29.1	26.3	20.6	16.9	14.1	11.3	11.3
177.5°	12.2	12.2	12.2	12.2	11.3	10.3	9.4	8.4	8.4	8.4	8.4
180°	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6



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CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6
2.5°	9.4	9.4	10.3	11.3	11.3	12.2	12.2	12.2	12.2	13.1
5°	12.2	12.2	13.1	14.1	15.0	15.0	14.1	14.1	14.1	14.1
7.5°	14.1	14.1	15.0	16.0	16.0	15.0	14.1	13.1	13.1	13.1
10°	16.0	15.0	16.0	16.9	16.0	15.0	13.1	12.2	12.2	12.2
12.5°	17.8	16.0	16.9	16.0	15.0	13.1	12.2	11.3	10.3	11.3
15°	20.6	16.9	16.0	15.0	14.1	12.2	11.3	10.3	9.4	9.4
17.5°	22.5	17.8	16.0	14.1	13.1	11.3	10.3	9.4	8.4	8.4
20°	24.4	18.8	15.0	13.1	12.2	10.3	9.4	9.4	8.4	8.4
22.5°	26.3	18.8	15.0	13.1	11.3	10.3	9.4	8.4	8.4	8.4
25°	29.1	19.7	15.0	12.2	10.3	10.3	9.4	8.4	7.5	7.5
27.5°	31.9	20.6	15.0	12.2	10.3	9.4	8.4	8.4	7.5	7.5
30°	33.8	21.6	15.0	11.3	9.4	8.4	8.4	7.5	7.5	6.6
32.5°	36.6	22.5	15.0	11.3	8.4	8.4	7.5	7.5	6.6	6.6
35°	39.4	23.5	15.0	10.3	8.4	7.5	7.5	6.6	6.6	6.6
37.5°	41.3	24.4	15.0	9.4	7.5	7.5	6.6	6.6	6.6	5.6
40°	44.1	25.3	14.1	9.4	6.6	6.6	5.6	5.6	5.6	5.6
42.5°	46.9	26.3	14.1	8.4	6.6	5.6	5.6	5.6	4.7	4.7
45°	48.8	27.2	14.1	8.4	5.6	5.6	4.7	4.7	4.7	3.8
47.5°	51.6	28.2	14.1	7.5	4.7	4.7	4.7	3.8	3.8	3.8
50°	53.5	29.1	14.1	7.5	4.7	3.8	3.8	3.8	2.8	2.8
52.5°	55.4	30.0	14.1	6.6	3.8	3.8	3.8	2.8	2.8	2.8
55°	58.2	30.0	14.1	6.6	3.8	2.8	2.8	2.8	2.8	2.8
57.5°	60.1	31.0	14.1	6.6	2.8	2.8	2.8	2.8	1.9	1.9
60°	61.9	31.9	14.1	5.6	2.8	2.8	2.8	2.8	1.9	1.9
62.5°	63.8	32.8	15.0	5.6	2.8	2.8	1.9	1.9	1.9	1.9
65°	65.7	33.8	15.0	5.6	2.8	1.9	1.9	1.9	1.9	1.9
67.5°	67.6	34.7	15.0	5.6	1.9	1.9	1.9	1.9	1.9	1.9
70°	69.5	35.7	15.0	5.6	1.9	1.9	1.9	1.9	1.9	1.9
72.5°	70.4	35.7	15.0	5.6	1.9	1.9	1.9	1.9	1.9	1.9
75°	71.3	36.6	16.0	5.6	1.9	1.9	1.9	1.9	1.9	1.9
77.5°	72.3	36.6	16.0	5.6	1.9	1.9	1.9	1.9	1.9	1.9
80°	73.2	37.5	16.0	5.6	1.9	1.9	1.9	1.9	1.9	1.9
82.5°	74.1	37.5	16.0	5.6	1.9	1.9	1.9	1.9	1.9	1.9
85°	75.1	38.5	16.0	5.6	1.9	1.9	1.9	1.9	1.9	1.9
87.5°	75.1	38.5	16.0	5.6	1.9	1.9	1.9	1.9	1.9	1.9
90°	75.1	38.5	16.0	5.6	1.9	1.9	1.9	1.9	1.9	1.9
92.5°	75.1	38.5	16.0	5.6	1.9	1.9	1.9	1.9	0.9	1.9
95°	75.1	38.5	16.0	5.6	1.9	1.9	1.9	1.9	1.9	1.9
97.5°	74.1	37.5	16.0	5.6	1.9	1.9	1.9	1.9	1.9	1.9
100°	73.2	37.5	16.0	5.6	1.9	1.9	1.9	1.9	1.9	1.9
102.5°	72.3	36.6	15.0	5.6	1.9	1.9	1.9	1.9	1.9	1.9
105°	71.3	36.6	15.0	5.6	1.9	1.9	1.9	1.9	1.9	1.9
107.5°	70.4	35.7	15.0	5.6	1.9	1.9	1.9	1.9	1.9	1.9
110°	68.5	34.7	15.0	5.6	1.9	1.9	1.9	1.9	1.9	1.9



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CATALOG NUMBER: 674-W-31-L3/830

CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
112.5°	66.6	33.8	15.0	5.6	1.9	1.9	1.9	1.9	1.9	1.9
115°	65.7	33.8	15.0	5.6	2.8	1.9	1.9	1.9	1.9	1.9
117.5°	63.8	32.8	14.1	5.6	2.8	1.9	1.9	1.9	1.9	1.9
120°	61.0	31.9	14.1	5.6	2.8	2.8	2.8	1.9	1.9	1.9
122.5°	60.1	31.0	14.1	6.6	3.8	2.8	2.8	2.8	2.8	2.8
125°	57.2	30.0	14.1	6.6	3.8	3.8	2.8	2.8	2.8	2.8
127.5°	55.4	29.1	14.1	6.6	3.8	3.8	3.8	2.8	2.8	2.8
130°	53.5	28.2	14.1	7.5	4.7	3.8	3.8	3.8	3.8	3.8
132.5°	50.7	28.2	14.1	7.5	4.7	4.7	4.7	3.8	3.8	3.8
135°	48.8	27.2	14.1	8.4	5.6	5.6	4.7	4.7	3.8	3.8
137.5°	46.0	26.3	14.1	8.4	6.6	5.6	5.6	4.7	4.7	4.7
140°	44.1	25.3	14.1	9.4	6.6	6.6	5.6	5.6	5.6	5.6
142.5°	41.3	24.4	14.1	9.4	7.5	6.6	6.6	6.6	5.6	5.6
145°	38.5	23.5	14.1	10.3	8.4	7.5	7.5	6.6	6.6	6.6
147.5°	35.7	22.5	14.1	10.3	8.4	7.5	7.5	7.5	6.6	6.6
150°	33.8	21.6	15.0	11.3	9.4	8.4	8.4	7.5	6.6	6.6
152.5°	31.0	20.6	15.0	12.2	10.3	9.4	8.4	7.5	7.5	6.6
155°	29.1	19.7	15.0	12.2	10.3	9.4	9.4	8.4	7.5	7.5
157.5°	26.3	18.8	15.0	13.1	11.3	10.3	9.4	8.4	8.4	7.5
160°	23.5	17.8	15.0	13.1	11.3	10.3	9.4	8.4	7.5	7.5
162.5°	21.6	16.9	15.0	14.1	12.2	11.3	9.4	8.4	8.4	7.5
165°	19.7	16.9	16.0	15.0	13.1	12.2	10.3	9.4	9.4	9.4
167.5°	17.8	16.0	16.9	16.0	15.0	13.1	11.3	11.3	10.3	10.3
170°	15.0	15.0	16.0	16.9	16.0	14.1	13.1	12.2	11.3	11.3
172.5°	13.1	13.1	14.1	16.0	16.0	15.0	14.1	13.1	12.2	12.2
175°	11.3	11.3	12.2	13.1	14.1	14.1	14.1	14.1	13.1	13.1
177.5°	8.4	8.4	9.4	10.3	10.3	10.3	11.3	11.3	11.3	11.3
180°	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6

(END OF REPORT)