

Scaled data based on original data using
LM-66-11 Electrical and Photometric Measurements of Single-Ended Compact
Fluorescent Lamps

Test Report Prepared for
Cooper Lighting Solutions
(formerly Eaton)

Brand: SHAPER

Report Number: 25493

Luminaire Tested: **104-CFL/2/18-120V-CCS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-66-11
Report Number: 25493
Test Lab: LIGHTING SCIENCES, INC.
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: SHAPER
Catalog Number: 104-CFL/2/18-120V-CCS
Description: DARK FABRIC SHADE SQUARE WALL SCONCE
Light Source: TWO SYLVANIA 18 WATT CFL LAMPS

CF18DD/E/830/ECO. LUMEN RATING = 2300 LMS.

Ballast/Driver: -

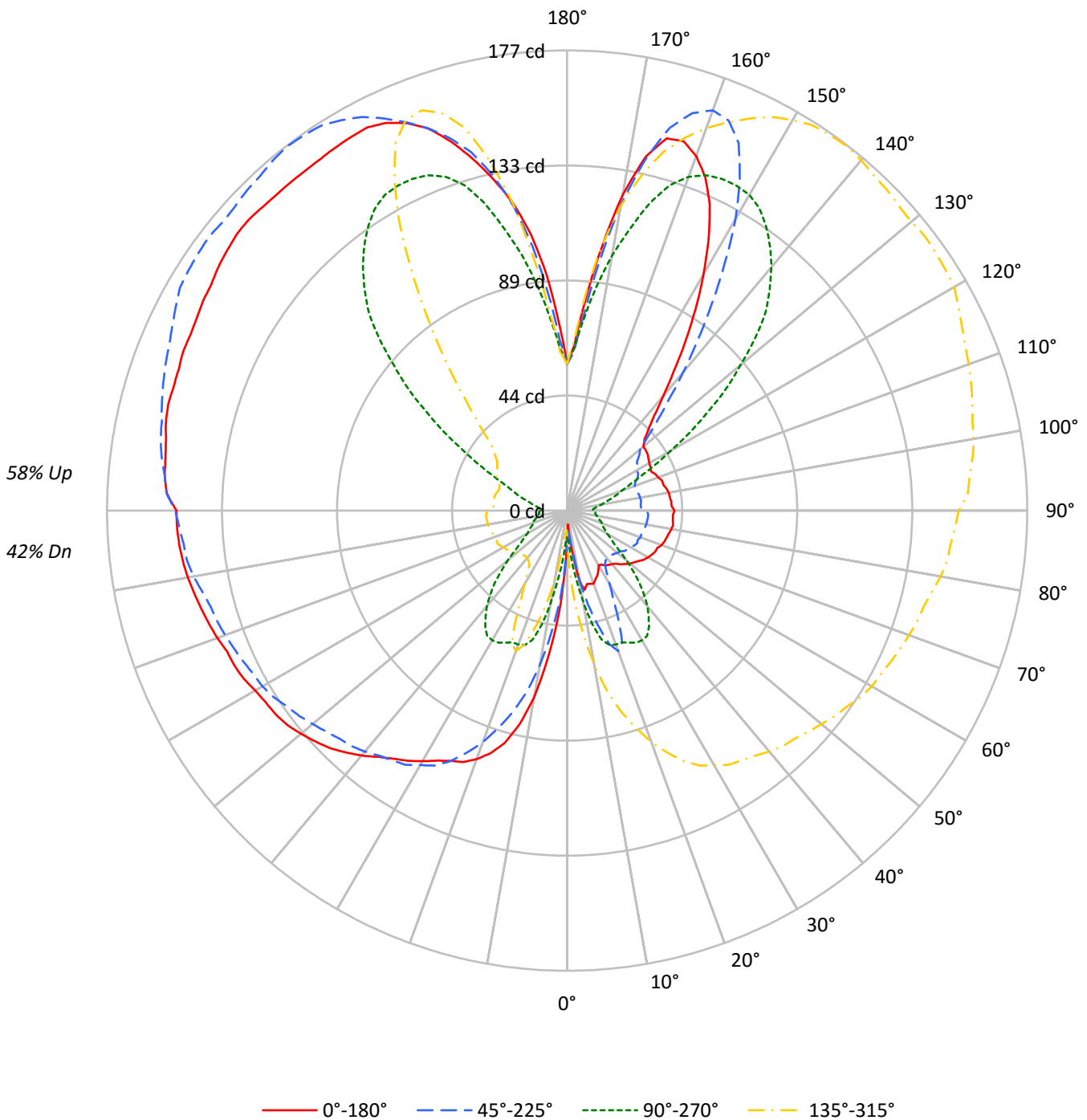
Summary

Lumens per Lamp: 2300 (1 lamp)
Luminaire Lumens: 1076.5 lumens
Efficiency: 46.8%
Efficacy: 32.6 lumens/watt
Spacing Criteria (0/90/45): 5.03 / 2.78 / 4.48
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 1' x H: 1')
CIE Type: General Diffuse

Input Watts (W): 33
Input Voltage (V): NR
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

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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	50	30	10	50	30	10	50	30	10	0																
RCR																																														
0	49	49	49	49	45	45	45	45	37	37	37	29	29	29	23	23	23	19	19	19	13	13	13	9	9	9	7	7	7	2																
1	43	40	38	36	39	37	34	33	30	28	27	23	22	21	17	16	16	13	13	13	9	9	9	7	7	7	5	5	5	2																
2	39	34	31	28	35	31	28	25	25	23	21	19	18	16	14	13	12	9	9	9	7	7	7	5	5	5	4	4	4	2																
3	35	30	26	22	31	27	23	20	22	19	17	17	15	13	12	11	9	7	7	7	5	5	5	4	4	4	3	3	3	2																
4	32	26	22	18	28	23	20	17	19	16	14	14	12	11	11	9	8	6	6	6	5	5	5	4	4	4	3	3	3	2																
5	29	23	19	15	26	21	17	14	17	14	12	13	11	9	9	8	6	5	5	5	4	4	4	3	3	3	2	2	2	2																
6	26	20	16	13	24	18	15	12	15	12	10	11	9	8	8	7	5	4	4	4	3	3	3	2	2	2	2	2	2	2																
7	24	18	14	11	22	16	13	10	13	10	8	10	8	7	8	6	5	3	3	3	2	2	2	2	2	2	2	2	2	2																
8	23	16	12	10	20	15	11	9	12	9	7	9	7	6	7	5	4	3	3	3	2	2	2	2	2	2	2	2	2	2																
9	21	15	11	9	19	13	10	8	11	8	6	9	6	5	6	5	4	3	3	3	2	2	2	2	2	2	2	2	2	2																
10	19	14	10	8	18	12	9	7	10	7	6	8	6	4	6	4	3	2	2	2	2	2	2	2	2	2	2	2	2	2																

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	297	297	297	297
5°	274	481	1274	481
10°	774	766	2047	766
15°	780	958	2463	958
20°	761	905	2588	905
25°	675	835	2607	835
30°	580	789	2658	789
35°	604	699	2728	699
40°	623	577	2848	577
45°	673	450	2980	450
50°	734	327	3093	327
55°	789	234	3204	234
60°	857	185	3307	185
65°	918	160	3466	160
70°	985	146	3644	146
75°	1057	129	3880	129
80°	1149	120	4173	120
85°	1228	114	4510	114



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ZONAL LUMENS:

Zone	Lumens	% Fixture	% Lamp
0°-10°	2.8	0.3	0.1
10°-20°	17.0	1.6	0.7
20°-30°	33.2	3.1	1.4
30°-40°	44.6	4.1	1.9
40°-50°	53.6	5.0	2.3
50°-60°	62.9	5.8	2.7
60°-70°	71.4	6.6	3.1
70°-80°	78.6	7.3	3.4
80°-90°	83.6	7.8	3.6
90°-100°	84.8	7.9	3.7
100°-110°	85.6	8.0	3.7
110°-120°	84.9	7.9	3.7
120°-130°	85.2	7.9	3.7
130°-140°	85.8	8.0	3.7
140°-150°	84.1	7.8	3.7
150°-160°	70.1	6.5	3.0
160°-170°	39.6	3.7	1.7
170°-180°	8.7	0.8	0.4
0°-30°	53.0	4.9	2.3
0°-40°	97.6	9.1	4.2
0°-60°	214.1	19.9	9.3
0°-90°	447.7	41.6	19.5
90°-120°	255.3	23.7	11.1
90°-150°	510.4	47.4	22.2
90°-180°	629.0	58.4	27.3
0°-180°	1076.5	100.0	46.8

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	9	9	9	9	9	
5°	9	19	42	19	9	1
15°	29	51	92	51	29	8
25°	28	56	106	56	28	13
35°	26	55	116	55	26	16
45°	29	39	129	39	29	23
55°	34	22	137	22	34	30
65°	37	16	141	16	37	37
75°	40	13	146	13	40	42
85°	41	11	150	11	41	33
90°	41	10	150	10	41	22
95°	40	11	155	11	40	33
105°	38	17	159	17	38	41
115°	36	31	160	31	36	36
125°	38	66	164	66	38	34
135°	44	108	165	108	44	35
145°	79	133	165	133	79	50
155°	130	141	164	141	130	59
165°	148	122	140	122	148	41
175°	81	74	91	74	81	9
180°	56	56	56	56	56	



TEST NUMBER: 25493

CATALOG NUMBER: 104-CFL/2/18-120V-CCS

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1
2.5°	5.3	7.5	7.4	7.2	12.1	18.5	23.1	26.5	24.8	26.5	23.1
5°	9.1	10.3	9.8	10.0	18.6	28.7	36.2	43.2	42.3	43.2	36.2
7.5°	17.1	17.5	15.1	15.9	26.2	39.1	47.9	57.2	57.6	57.2	47.9
10°	27.5	27.8	26.0	26.1	35.5	50.9	60.1	70.6	72.7	70.6	60.1
12.5°	31.2	36.5	37.0	36.5	44.8	62.3	71.0	81.0	83.9	81.0	71.0
15°	29.3	39.9	45.4	43.6	51.4	71.7	80.0	89.3	92.5	89.3	80.0
17.5°	29.5	38.5	53.8	49.1	54.2	80.4	87.3	95.3	97.8	95.3	87.3
20°	29.9	35.6	57.5	57.1	54.8	88.1	94.8	99.4	101.7	99.4	94.8
22.5°	28.5	33.5	55.5	64.4	54.9	91.9	100.8	101.6	104.7	101.6	100.8
25°	27.5	30.9	47.2	69.7	56.0	96.0	106.3	103.9	106.2	103.9	106.3
27.5°	26.0	28.5	38.3	74.3	57.3	98.9	110.6	105.5	108.4	105.5	110.6
30°	24.3	26.9	32.7	72.9	57.6	100.9	113.0	106.9	111.3	106.9	113.0
32.5°	24.6	26.7	28.2	65.0	57.2	103.8	115.9	109.2	114.1	109.2	115.9
35°	25.8	26.8	25.3	55.7	54.8	106.3	117.2	111.0	116.5	111.0	117.2
37.5°	26.3	27.0	24.3	45.2	51.5	108.4	118.8	113.3	119.4	113.3	118.8
40°	26.9	27.5	24.0	35.7	48.0	110.0	121.0	116.2	123.0	116.2	121.0
42.5°	27.7	28.3	23.7	28.5	43.7	110.9	122.8	118.8	126.1	118.8	122.8
45°	29.2	28.7	24.2	24.6	39.3	111.4	124.0	120.7	129.2	120.7	124.0
47.5°	30.4	30.5	24.6	23.2	34.4	111.1	125.8	123.0	131.4	123.0	125.8
50°	31.7	31.7	25.3	22.0	29.7	111.2	127.7	125.1	133.6	125.1	127.7
52.5°	32.6	32.3	25.8	20.8	25.3	112.4	129.8	126.6	135.6	126.6	129.8
55°	33.7	33.8	27.0	20.3	21.9	113.0	131.4	127.3	136.8	127.3	131.4
57.5°	35.1	35.0	27.7	20.4	19.7	113.4	133.7	128.0	137.4	128.0	133.7
60°	35.9	35.7	28.2	20.4	17.7	114.5	135.3	128.6	138.5	128.6	135.3
62.5°	36.7	35.7	29.1	20.3	16.6	115.3	136.1	128.8	140.2	128.8	136.1
65°	37.4	36.3	29.7	20.5	15.5	116.8	137.4	129.7	141.2	129.7	137.4
67.5°	37.5	37.3	29.4	20.2	14.4	119.0	138.7	130.7	141.6	130.7	138.7
70°	38.7	37.4	30.0	20.1	14.3	120.2	140.0	131.7	143.2	131.7	140.0
72.5°	39.3	38.5	30.0	19.7	13.5	122.2	141.2	132.6	144.5	132.6	141.2
75°	39.7	38.7	30.1	20.1	12.6	123.1	142.1	133.7	145.7	133.7	142.1
77.5°	40.1	38.8	30.6	20.0	12.0	124.7	143.8	134.9	146.9	134.9	143.8
80°	40.8	39.8	30.9	19.5	11.6	127.0	145.9	136.1	148.2	136.1	145.9
82.5°	41.1	40.0	31.0	19.8	11.0	129.0	147.5	137.1	149.1	137.1	147.5
85°	40.8	39.8	31.2	19.5	10.9	130.7	148.1	137.2	149.8	137.2	148.1
87.5°	40.7	40.2	31.2	19.1	10.7	133.1	149.3	137.8	150.2	137.8	149.3
90°	41.3	40.1	30.5	19.5	10.3	135.1	150.7	138.8	150.3	138.8	150.7
92.5°	40.2	37.3	28.3	18.0	9.8	131.4	154.3	137.8	154.2	137.8	154.3
95°	40.2	37.0	28.4	17.9	10.6	133.6	155.4	139.3	155.4	139.3	155.4
97.5°	39.8	36.9	28.7	18.5	11.8	136.1	157.3	140.0	155.8	140.0	157.3
100°	39.7	36.7	28.5	18.5	13.4	138.5	158.8	141.5	156.7	141.5	158.8
102.5°	39.1	36.1	28.3	18.9	14.9	141.1	159.7	142.4	158.1	142.4	159.7
105°	38.3	35.8	27.8	19.5	17.3	143.7	161.4	143.8	158.8	143.8	161.4
107.5°	38.3	34.6	27.4	21.0	19.8	145.5	162.9	144.4	158.7	144.4	162.9
110°	37.3	34.1	27.7	22.2	22.2	147.7	164.4	145.4	159.0	145.4	164.4



TEST NUMBER: 25493

CATALOG NUMBER: 104-CFL/2/18-120V-CCS

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
112.5°	36.7	33.7	28.3	22.9	25.9	148.3	165.7	146.7	159.9	146.7	165.7
115°	35.6	33.9	29.9	24.2	31.1	150.1	167.6	147.5	159.9	147.5	167.6
117.5°	36.2	34.5	30.8	24.8	38.1	151.8	169.7	149.6	160.6	149.6	169.7
120°	36.5	34.4	30.9	26.7	45.9	154.1	171.9	151.4	161.6	151.4	171.9
122.5°	37.1	35.1	31.9	31.0	55.9	156.1	172.5	153.4	162.2	153.4	172.5
125°	37.8	36.6	32.8	37.0	65.9	157.7	173.0	155.1	163.7	155.1	173.0
127.5°	38.1	37.7	34.9	45.4	77.2	160.2	173.4	156.4	164.7	156.4	173.4
130°	38.3	38.3	36.7	55.0	87.0	162.6	172.8	157.7	165.7	157.7	172.8
132.5°	40.3	40.5	41.9	66.0	98.1	165.2	173.2	158.5	165.9	158.5	173.2
135°	44.2	45.5	49.3	78.4	108.0	168.3	174.2	158.6	165.4	158.6	174.2
137.5°	49.5	51.1	57.9	90.9	115.3	169.5	174.7	159.8	165.1	159.8	174.7
140°	57.6	59.6	69.4	104.3	122.2	170.9	175.9	160.6	165.1	160.6	175.9
142.5°	67.1	70.1	82.3	117.4	128.2	172.4	176.7	161.4	165.0	161.4	176.7
145°	79.2	82.5	97.0	128.8	133.4	172.7	176.3	163.0	165.2	163.0	176.3
147.5°	91.8	95.6	112.9	137.9	137.7	172.4	175.7	165.1	165.7	165.1	175.7
150°	104.9	109.6	129.6	143.9	140.2	171.4	173.4	165.8	166.0	165.8	173.4
152.5°	117.8	123.1	143.8	146.3	140.9	168.6	170.7	166.7	166.2	166.7	170.7
155°	129.8	137.1	156.0	147.5	140.8	164.4	166.4	165.5	164.5	165.5	166.4
157.5°	138.8	147.7	162.4	146.9	139.6	158.7	161.6	162.3	161.3	162.3	161.6
160°	145.1	155.5	163.8	144.3	136.6	152.0	156.5	158.5	156.4	158.5	156.5
162.5°	148.9	157.3	160.3	138.7	131.2	144.1	150.2	152.2	148.9	152.2	150.2
165°	148.2	152.2	152.4	130.9	122.3	133.7	142.7	145.0	140.0	145.0	142.7
167.5°	139.4	140.0	137.9	118.8	110.7	122.1	132.0	135.9	130.4	135.9	132.0
170°	123.3	122.5	119.7	104.1	99.5	108.0	119.0	123.4	120.1	123.4	119.0
172.5°	102.3	99.6	97.4	88.6	87.0	92.6	102.7	107.6	107.2	107.6	102.7
175°	81.3	79.0	76.4	73.1	74.1	77.9	83.9	89.9	91.2	89.9	83.9
177.5°	63.5	62.3	61.1	60.3	62.4	62.9	65.8	69.0	72.1	69.0	65.8
180°	56.4	56.4	56.4	56.4	56.4	56.4	56.4	56.4	56.4	56.4	56.4



TEST NUMBER: 25493

CATALOG NUMBER: 104-CFL/2/18-120V-CCS

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	9.1	9.1	9.1	9.1	9.1	9.1
2.5°	18.5	12.1	7.2	7.4	7.5	5.3
5°	28.7	18.6	10.0	9.8	10.3	9.1
7.5°	39.1	26.2	15.9	15.1	17.5	17.1
10°	50.9	35.5	26.1	26.0	27.8	27.5
12.5°	62.3	44.8	36.5	37.0	36.5	31.2
15°	71.7	51.4	43.6	45.4	39.9	29.3
17.5°	80.4	54.2	49.1	53.8	38.5	29.5
20°	88.1	54.8	57.1	57.5	35.6	29.9
22.5°	91.9	54.9	64.4	55.5	33.5	28.5
25°	96.0	56.0	69.7	47.2	30.9	27.5
27.5°	98.9	57.3	74.3	38.3	28.5	26.0
30°	100.9	57.6	72.9	32.7	26.9	24.3
32.5°	103.8	57.2	65.0	28.2	26.7	24.6
35°	106.3	54.8	55.7	25.3	26.8	25.8
37.5°	108.4	51.5	45.2	24.3	27.0	26.3
40°	110.0	48.0	35.7	24.0	27.5	26.9
42.5°	110.9	43.7	28.5	23.7	28.3	27.7
45°	111.4	39.3	24.6	24.2	28.7	29.2
47.5°	111.1	34.4	23.2	24.6	30.5	30.4
50°	111.2	29.7	22.0	25.3	31.7	31.7
52.5°	112.4	25.3	20.8	25.8	32.3	32.6
55°	113.0	21.9	20.3	27.0	33.8	33.7
57.5°	113.4	19.7	20.4	27.7	35.0	35.1
60°	114.5	17.7	20.4	28.2	35.7	35.9
62.5°	115.3	16.6	20.3	29.1	35.7	36.7
65°	116.8	15.5	20.5	29.7	36.3	37.4
67.5°	119.0	14.4	20.2	29.4	37.3	37.5
70°	120.2	14.3	20.1	30.0	37.4	38.7
72.5°	122.2	13.5	19.7	30.0	38.5	39.3
75°	123.1	12.6	20.1	30.1	38.7	39.7
77.5°	124.7	12.0	20.0	30.6	38.8	40.1
80°	127.0	11.6	19.5	30.9	39.8	40.8
82.5°	129.0	11.0	19.8	31.0	40.0	41.1
85°	130.7	10.9	19.5	31.2	39.8	40.8
87.5°	133.1	10.7	19.1	31.2	40.2	40.7
90°	135.1	10.3	19.5	30.5	40.1	41.3
92.5°	131.4	9.8	18.0	28.3	37.3	40.2
95°	133.6	10.6	17.9	28.4	37.0	40.2
97.5°	136.1	11.8	18.5	28.7	36.9	39.8
100°	138.5	13.4	18.5	28.5	36.7	39.7
102.5°	141.1	14.9	18.9	28.3	36.1	39.1
105°	143.7	17.3	19.5	27.8	35.8	38.3
107.5°	145.5	19.8	21.0	27.4	34.6	38.3
110°	147.7	22.2	22.2	27.7	34.1	37.3



TEST NUMBER: 25493

CATALOG NUMBER: 104-CFL/2/18-120V-CCS

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	148.3	25.9	22.9	28.3	33.7	36.7
115°	150.1	31.1	24.2	29.9	33.9	35.6
117.5°	151.8	38.1	24.8	30.8	34.5	36.2
120°	154.1	45.9	26.7	30.9	34.4	36.5
122.5°	156.1	55.9	31.0	31.9	35.1	37.1
125°	157.7	65.9	37.0	32.8	36.6	37.8
127.5°	160.2	77.2	45.4	34.9	37.7	38.1
130°	162.6	87.0	55.0	36.7	38.3	38.3
132.5°	165.2	98.1	66.0	41.9	40.5	40.3
135°	168.3	108.0	78.4	49.3	45.5	44.2
137.5°	169.5	115.3	90.9	57.9	51.1	49.5
140°	170.9	122.2	104.3	69.4	59.6	57.6
142.5°	172.4	128.2	117.4	82.3	70.1	67.1
145°	172.7	133.4	128.8	97.0	82.5	79.2
147.5°	172.4	137.7	137.9	112.9	95.6	91.8
150°	171.4	140.2	143.9	129.6	109.6	104.9
152.5°	168.6	140.9	146.3	143.8	123.1	117.8
155°	164.4	140.8	147.5	156.0	137.1	129.8
157.5°	158.7	139.6	146.9	162.4	147.7	138.8
160°	152.0	136.6	144.3	163.8	155.5	145.1
162.5°	144.1	131.2	138.7	160.3	157.3	148.9
165°	133.7	122.3	130.9	152.4	152.2	148.2
167.5°	122.1	110.7	118.8	137.9	140.0	139.4
170°	108.0	99.5	104.1	119.7	122.5	123.3
172.5°	92.6	87.0	88.6	97.4	99.6	102.3
175°	77.9	74.1	73.1	76.4	79.0	81.3
177.5°	62.9	62.4	60.3	61.1	62.3	63.5
180°	56.4	56.4	56.4	56.4	56.4	56.4

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