

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: 19160

Luminaire Tested: **672-WP-16-CF1/27**

Issue Date: 3/3/2020

**Test Information**

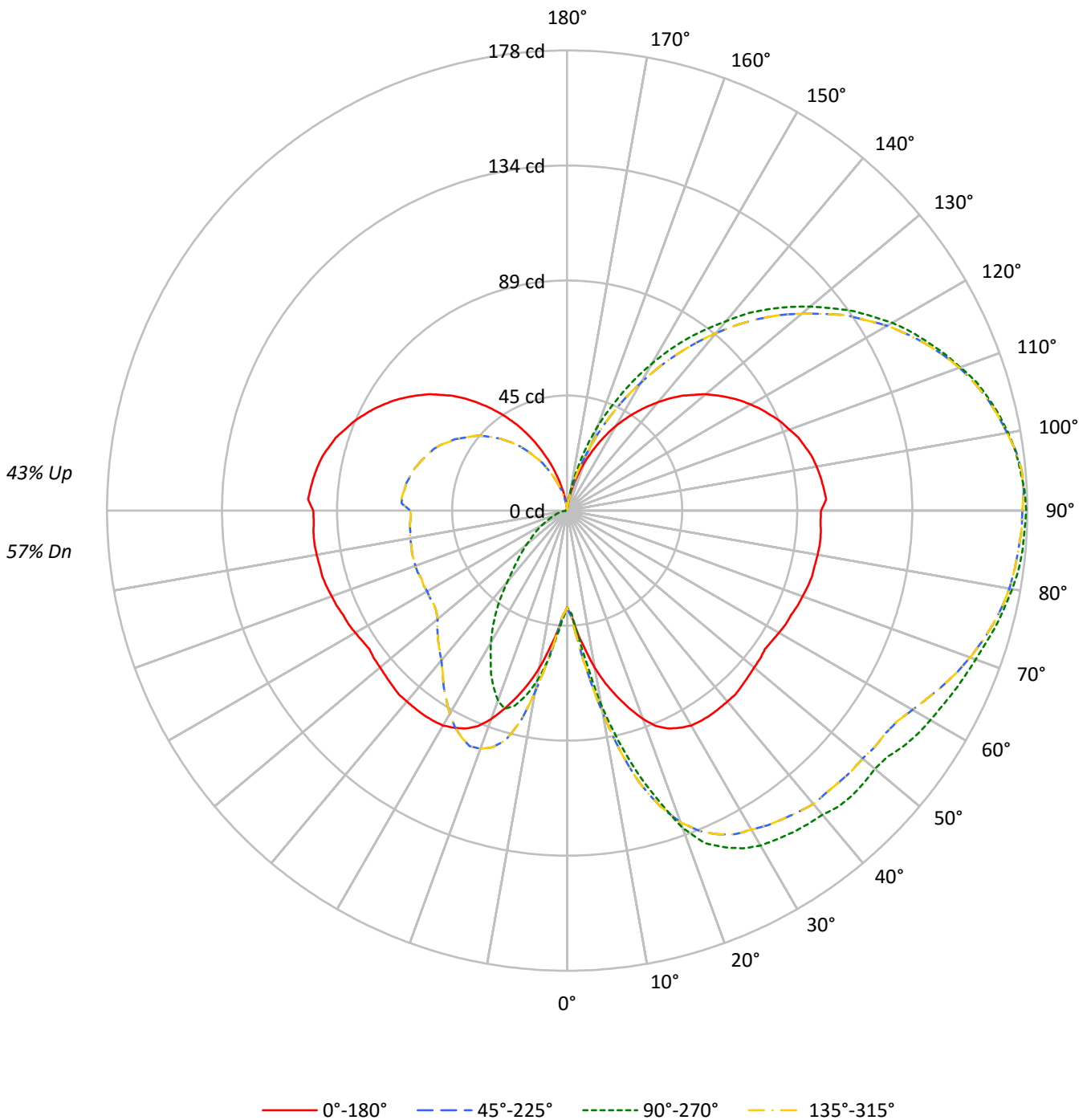
Test Method: LM-66-11  
Report Number: 19160  
Test Lab:  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: SHAPER  
Catalog Number: 672-WP-16-CF1/27  
Description: EXTERIOR WALL MOUNT LUMINAIRE WITH WHITE INTERIOR AND WHITE PLASTIC  
OVER CLEAR PLASTIC LENS  
Light Source: ONE GE 27 WATT CPFL LAMP  
  
F27/24BX/SPX35. LUMEN RATING = 1800 LMS.  
  
Ballast/Driver: -

**Summary**

Lumens per Lamp: 1800 (1 lamp)  
Luminaire Lumens: 1134.0 lumens  
Efficiency: 63.0%  
Efficacy: 45.4 lumens/watt  
Spacing Criteria (0/90/45): 2.77 / 2.67 / 2.85  
Luminous Opening: Rectangular w/ Sides (W: 0.35' x L: 0.46' x H: 1.25')  
CIE Type: General Diffuse  
  
Input Watts (W): 25  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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: 19160  
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### Luminous Intensity Polar Plot





TEST NUMBER: 19160

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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	69	69	69	69	64	64	64	64	55	55	55	47	47	47	39	39	39	36	36	36	30	30	30	25	25	25	21	21	21	18																
1	59	55	52	48	55	51	48	45	43	41	39	36	34	33	30	28	27	24	24	24	20	20	20	18	18	18	15	15	15	12																
2	53	47	42	37	49	43	39	35	36	33	30	30	27	25	25	22	20	18	18	18	16	16	16	14	14	14	11	11	11	9																
3	48	40	34	30	44	37	32	28	31	27	24	26	23	20	21	18	16	14	14	14	13	13	13	11	11	11	9	9	9	7																
4	43	35	29	24	40	32	27	23	27	23	19	23	19	16	18	15	13	11	11	11	10	10	10	9	9	9	7	7	7	6																
5	39	31	25	20	36	28	23	19	24	20	16	20	16	14	16	13	11	9	9	9	8	8	8	7	7	7	6	6	6	5																
6	36	27	22	17	33	25	20	16	21	17	14	18	14	12	14	12	9	8	8	8	7	7	7	6	6	6	5	5	5	4																
7	33	25	19	15	31	23	18	14	19	15	12	16	13	10	13	10	8	7	7	7	6	6	6	5	5	5	4	4	4	3																
8	31	22	17	13	28	21	16	12	17	13	10	15	11	9	12	9	7	6	6	6	5	5	5	4	4	4	3	3	3	2																
9	29	20	15	11	26	19	14	11	16	12	9	13	10	8	11	8	6	5	5	5	4	4	4	3	3	3	2	2	2	1																
10	27	18	13	10	25	17	12	9	15	11	8	12	9	7	10	7	6	5	5	5	4	4	4	3	3	3	2	2	2	1																

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°	270°
0°	2507	2507	2507	2507
5°	2603	2460	2603	2536
10°	2836	3187	2836	2791
15°	2980	3710	2980	2762
20°	3069	4040	3069	2419
25°	3026	3977	3026	1926
30°	2885	3772	2885	1485
35°	2716	3544	2716	1117
40°	2565	3354	2565	786
45°	2434	3224	2434	561
50°	2317	3075	2317	404
55°	2231	3036	2231	294
60°	2217	3018	2217	205
65°	2215	3018	2215	141
70°	2237	3041	2237	92
75°	2274	3097	2274	61
80°	2309	3166	2309	33
85°	2357	3243	2357	9



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture	% Lamp
0°-10°	5.4	0.5	0.3
10°-20°	25.8	2.3	1.4
20°-30°	49.8	4.4	2.8
30°-40°	66.5	5.9	3.7
40°-50°	78.5	6.9	4.4
50°-60°	89.1	7.9	4.9
60°-70°	101.0	8.9	5.6
70°-80°	111.1	9.8	6.2
80°-90°	116.1	10.2	6.4
90°-100°	117.4	10.4	6.5
100°-110°	109.0	9.6	6.1
110°-120°	93.4	8.2	5.2
120°-130°	73.1	6.4	4.1
130°-140°	51.0	4.5	2.8
140°-150°	29.9	2.6	1.7
150°-160°	13.3	1.2	0.7
160°-170°	3.4	0.3	0.2
170°-180°	0.2	0.0	0.0
0°-30°	81.0	7.1	4.5
0°-40°	147.4	13.0	8.2
0°-60°	315.0	27.8	17.5
0°-90°	643.3	56.7	35.7
90°-120°	319.8	28.2	17.8
90°-150°	473.8	41.8	26.3
90°-180°	491.0	43.3	27.3
0°-180°	1134.0	100.0	63.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	38	38	38	38	38	
5°	48	48	48	50	48	5
15°	74	105	74	78	74	21
25°	93	144	93	70	93	43
35°	97	152	97	48	97	61
45°	96	156	96	27	96	74
55°	93	159	93	15	93	84
65°	96	165	96	8	96	95
75°	98	172	98	3	98	104
85°	98	177	98	0	98	80
90°	98	178	98	0	98	54
95°	100	176	100	0	100	81
105°	95	169	95	0	95	101
115°	87	154	87	1	87	86
125°	76	135	76	0	76	68
135°	63	110	63	0	63	49
145°	46	81	46	0	46	29
155°	29	50	29	0	29	14
165°	12	20	12	0	12	4
175°	2	1	2	0	2	0
180°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	37.5	37.5	37.5	37.5	37.5	37.5	37.5	37.5	37.5	37.5	37.5
2.5°	40.9	42.2	41.6	40.6	40.0	40.6	41.6	42.2	40.9	40.2	41.0
5°	48.0	51.2	52.0	50.2	48.1	50.2	52.0	51.2	48.0	46.6	48.6
7.5°	54.4	60.3	64.7	63.4	60.6	63.4	64.7	60.3	54.4	54.3	58.8
10°	61.8	70.6	79.4	80.7	76.5	80.7	79.4	70.6	61.8	62.9	70.9
12.5°	68.4	81.0	95.6	95.3	90.9	95.3	95.6	81.0	68.4	70.4	83.6
15°	74.4	89.2	109.5	108.8	104.9	108.8	109.5	89.2	74.4	78.2	91.9
17.5°	80.2	95.1	120.0	120.3	117.6	120.3	120.0	95.1	80.2	84.5	96.0
20°	85.8	101.0	128.3	132.1	130.6	132.1	128.3	101.0	85.8	90.5	98.1
22.5°	90.3	105.7	134.2	141.4	139.2	141.4	134.2	105.7	90.3	95.1	98.6
25°	93.0	108.8	138.2	146.5	143.7	146.5	138.2	108.8	93.0	97.2	96.7
27.5°	94.7	111.2	141.1	149.7	147.3	149.7	141.1	111.2	94.7	96.7	94.2
30°	96.0	112.4	142.5	151.5	149.6	151.5	142.5	112.4	96.0	95.8	90.8
32.5°	96.4	114.2	144.3	152.4	150.8	152.4	144.3	114.2	96.4	95.0	86.9
35°	96.6	114.8	145.6	153.9	152.0	153.9	145.6	114.8	96.6	93.4	83.2
37.5°	96.5	114.7	146.9	155.1	152.9	155.1	146.9	114.7	96.5	92.5	79.1
40°	96.4	115.1	148.2	156.6	153.6	156.6	148.2	115.1	96.4	91.1	75.7
42.5°	96.4	115.5	148.2	158.0	155.3	158.0	148.2	115.5	96.4	89.5	73.1
45°	95.7	115.3	148.7	159.5	155.9	159.5	148.7	115.3	95.7	88.3	70.6
47.5°	95.0	115.5	149.1	159.9	155.8	159.9	149.1	115.5	95.0	86.6	68.1
50°	94.4	115.6	149.2	160.2	155.4	160.2	149.2	115.6	94.4	85.3	65.4
52.5°	94.1	116.1	150.1	160.9	156.3	160.9	150.1	116.1	94.1	84.3	63.8
55°	93.4	117.0	150.3	162.5	158.9	162.5	150.3	117.0	93.4	84.1	63.0
57.5°	93.9	118.1	151.5	165.1	160.8	165.1	151.5	118.1	93.9	83.8	62.9
60°	94.6	119.8	154.2	167.3	162.2	167.3	154.2	119.8	94.6	84.2	62.5
62.5°	95.3	121.6	157.2	169.1	163.6	169.1	157.2	121.6	95.3	84.5	62.6
65°	95.6	124.1	160.3	170.8	165.2	170.8	160.3	124.1	95.6	85.0	62.2
67.5°	96.4	126.0	163.3	172.7	166.7	172.7	163.3	126.0	96.4	85.4	62.5
70°	96.9	127.5	165.9	174.7	168.2	174.7	165.9	127.5	96.9	85.6	62.5
72.5°	97.6	129.1	168.3	177.0	169.9	177.0	168.3	129.1	97.6	86.0	62.3
75°	98.1	130.3	170.5	179.1	171.8	179.1	170.5	130.3	98.1	86.2	62.2
77.5°	98.1	131.5	172.3	181.0	173.3	181.0	172.3	131.5	98.1	86.4	61.7
80°	98.4	132.3	173.7	182.6	174.8	182.6	173.7	132.3	98.4	86.3	61.7
82.5°	98.6	132.5	174.6	183.5	176.1	183.5	174.6	132.5	98.6	86.2	61.2
85°	98.5	132.6	175.2	184.4	176.8	184.4	175.2	132.6	98.5	85.9	61.1
87.5°	98.1	133.0	175.9	185.2	177.1	185.2	175.9	133.0	98.1	85.8	60.5
90°	98.2	133.1	176.1	185.5	177.6	185.5	176.1	133.1	98.2	85.6	60.6
92.5°	100.3	134.0	176.8	186.9	177.1	186.9	176.8	134.0	100.3	89.7	64.1
95°	99.6	133.4	176.5	186.0	176.0	186.0	176.5	133.4	99.6	89.1	64.1
97.5°	98.9	132.3	175.2	184.6	175.0	184.6	175.2	132.3	98.9	88.6	63.4
100°	98.0	130.9	172.8	182.8	173.2	182.8	172.8	130.9	98.0	87.6	63.0
102.5°	97.0	129.1	170.6	180.4	171.2	180.4	170.6	129.1	97.0	86.9	62.1
105°	95.3	126.5	168.1	177.1	168.6	177.1	168.1	126.5	95.3	85.5	61.4
107.5°	93.8	124.0	165.0	174.0	165.9	174.0	165.0	124.0	93.8	84.3	60.2
110°	91.5	121.2	161.5	170.6	161.9	170.6	161.5	121.2	91.5	82.6	59.1



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
112.5°	89.6	118.0	157.4	166.5	158.2	166.5	157.4	118.0	89.6	80.9	57.9
115°	87.1	114.2	152.9	162.1	154.0	162.1	152.9	114.2	87.1	78.7	56.7
117.5°	84.7	110.7	148.0	157.0	149.9	157.0	148.0	110.7	84.7	76.6	55.1
120°	82.0	106.8	143.0	151.8	145.2	151.8	143.0	106.8	82.0	74.3	53.0
122.5°	79.3	102.4	137.0	145.9	139.8	145.9	137.0	102.4	79.3	71.7	51.4
125°	76.3	98.1	131.7	140.1	134.7	140.1	131.7	98.1	76.3	69.4	49.1
127.5°	73.1	92.8	124.9	133.8	128.6	133.8	124.9	92.8	73.1	66.3	47.0
130°	70.0	87.9	118.5	127.1	122.7	127.1	118.5	87.9	70.0	63.6	45.1
132.5°	66.2	82.7	112.0	119.7	116.6	119.7	112.0	82.7	66.2	60.4	42.5
135°	62.8	77.3	104.8	112.2	110.2	112.2	104.8	77.3	62.8	57.1	40.0
137.5°	58.9	71.8	97.4	104.6	103.5	104.6	97.4	71.8	58.9	53.8	37.5
140°	54.7	66.3	89.5	96.1	95.6	96.1	89.5	66.3	54.7	50.1	34.7
142.5°	50.6	60.2	81.7	88.0	88.4	88.0	81.7	60.2	50.6	46.8	32.2
145°	46.4	54.5	73.5	79.9	81.3	79.9	73.5	54.5	46.4	43.0	29.2
147.5°	42.1	48.4	65.5	72.3	73.6	72.3	65.5	48.4	42.1	39.3	26.3
150°	37.9	42.3	57.0	63.7	65.8	63.7	57.0	42.3	37.9	35.2	23.3
152.5°	33.4	36.4	49.4	56.0	57.8	56.0	49.4	36.4	33.4	31.3	20.8
155°	28.8	30.7	41.5	47.9	49.8	47.9	41.5	30.7	28.8	27.1	17.5
157.5°	24.2	25.3	33.8	40.0	42.1	40.0	33.8	25.3	24.2	22.9	14.8
160°	20.1	20.2	26.5	32.1	35.0	32.1	26.5	20.2	20.1	18.9	11.9
162.5°	15.8	15.2	19.7	24.8	27.4	24.8	19.7	15.2	15.8	15.4	9.7
165°	11.8	10.9	14.5	18.1	19.9	18.1	14.5	10.9	11.8	11.4	7.1
167.5°	8.2	7.4	9.5	12.2	13.5	12.2	9.5	7.4	8.2	8.4	5.3
170°	5.1	4.2	5.3	7.0	8.3	7.0	5.3	4.2	5.1	5.3	3.6
172.5°	3.1	2.1	3.0	3.4	4.3	3.4	3.0	2.1	3.1	3.3	2.1
175°	1.6	0.8	1.3	0.9	1.3	0.9	1.3	0.8	1.6	1.6	0.8
177.5°	0.8	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.8	0.7	0.7
180°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5



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**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	37.5	37.5	37.5	37.5	37.5	37.5
2.5°	41.6	42.3	41.6	41.0	40.2	40.9
5°	50.3	49.6	50.3	48.6	46.6	48.0
7.5°	61.0	58.9	61.0	58.8	54.3	54.4
10°	71.6	67.0	71.6	70.9	62.9	61.8
12.5°	77.6	73.2	77.6	83.6	70.4	68.4
15°	83.0	78.1	83.0	91.9	78.2	74.4
17.5°	86.2	80.4	86.2	96.0	84.5	80.2
20°	86.3	78.2	86.3	98.1	90.5	85.8
22.5°	83.9	74.2	83.9	98.6	95.1	90.3
25°	80.4	69.6	80.4	96.7	97.2	93.0
27.5°	75.5	64.1	75.5	94.2	96.7	94.7
30°	70.3	58.9	70.3	90.8	95.8	96.0
32.5°	65.1	53.5	65.1	86.9	95.0	96.4
35°	60.4	47.9	60.4	83.2	93.4	96.6
37.5°	55.5	41.9	55.5	79.1	92.5	96.5
40°	50.6	36.0	50.6	75.7	91.1	96.4
42.5°	45.9	30.8	45.9	73.1	89.5	96.4
45°	42.2	27.1	42.2	70.6	88.3	95.7
47.5°	39.8	23.6	39.8	68.1	86.6	95.0
50°	37.6	20.4	37.6	65.4	85.3	94.4
52.5°	35.7	17.6	35.7	63.8	84.3	94.1
55°	33.9	15.4	33.9	63.0	84.1	93.4
57.5°	32.7	13.3	32.7	62.9	83.8	93.9
60°	31.3	11.0	31.3	62.5	84.2	94.6
62.5°	30.3	9.3	30.3	62.6	84.5	95.3
65°	29.7	7.7	29.7	62.2	85.0	95.6
67.5°	28.7	6.3	28.7	62.5	85.4	96.4
70°	28.0	5.1	28.0	62.5	85.6	96.9
72.5°	27.4	4.3	27.4	62.3	86.0	97.6
75°	27.0	3.4	27.0	62.2	86.2	98.1
77.5°	26.6	2.3	26.6	61.7	86.4	98.1
80°	25.8	1.8	25.8	61.7	86.3	98.4
82.5°	25.5	1.0	25.5	61.2	86.2	98.6
85°	24.8	0.5	24.8	61.1	85.9	98.5
87.5°	25.0	0.5	25.0	60.5	85.8	98.1
90°	24.7	0.5	24.7	60.6	85.6	98.2
92.5°	28.0	0.6	28.0	64.1	89.7	100.3
95°	28.2	0.5	28.2	64.1	89.1	99.6
97.5°	27.8	0.5	27.8	63.4	88.6	98.9
100°	27.8	0.5	27.8	63.0	87.6	98.0
102.5°	27.0	0.6	27.0	62.1	86.9	97.0
105°	26.8	0.5	26.8	61.4	85.5	95.3
107.5°	25.9	0.6	25.9	60.2	84.3	93.8
110°	25.6	0.5	25.6	59.1	82.6	91.5





TEST NUMBER: 19160

CATALOG NUMBER: 672-WP-16-CF1/27

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	24.9	0.7	24.9	57.9	80.9	89.6
115°	24.4	0.7	24.4	56.7	78.7	87.1
117.5°	23.5	0.7	23.5	55.1	76.6	84.7
120°	22.7	0.5	22.7	53.0	74.3	82.0
122.5°	21.7	0.6	21.7	51.4	71.7	79.3
125°	20.7	0.5	20.7	49.1	69.4	76.3
127.5°	19.6	0.5	19.6	47.0	66.3	73.1
130°	18.5	0.5	18.5	45.1	63.6	70.0
132.5°	17.2	0.5	17.2	42.5	60.4	66.2
135°	16.1	0.5	16.1	40.0	57.1	62.8
137.5°	14.8	0.5	14.8	37.5	53.8	58.9
140°	13.5	0.5	13.5	34.7	50.1	54.7
142.5°	12.2	0.5	12.2	32.2	46.8	50.6
145°	11.0	0.5	11.0	29.2	43.0	46.4
147.5°	9.6	0.5	9.6	26.3	39.3	42.1
150°	8.4	0.5	8.4	23.3	35.2	37.9
152.5°	6.8	0.5	6.8	20.8	31.3	33.4
155°	6.1	0.5	6.1	17.5	27.1	28.8
157.5°	4.6	0.5	4.6	14.8	22.9	24.2
160°	4.1	0.5	4.1	11.9	18.9	20.1
162.5°	3.1	0.5	3.1	9.7	15.4	15.8
165°	2.3	0.5	2.3	7.1	11.4	11.8
167.5°	1.2	0.5	1.2	5.3	8.4	8.2
170°	1.0	0.5	1.0	3.6	5.3	5.1
172.5°	0.5	0.5	0.5	2.1	3.3	3.1
175°	0.5	0.5	0.5	0.8	1.6	1.6
177.5°	0.5	0.5	0.5	0.7	0.7	0.8
180°	0.5	0.5	0.5	0.5	0.5	0.5

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