

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: FAIL-SAFE

Report Number: G1-1710-337-14

Luminaire Tested: **B95-PP-BLK-LD4-12W-40-OPL-120-EDC1**

Test Date: 11/08/17



**Test Information**

Test Method: LM-79-08  
Report Number: G1-1710-337-14  
Test Lab: INNOVATION CENTER(G1)  
Test Date: 11/08/17  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: B95-PP-BLK-LD4-12W-40-OPL-120-EDC1  
Description: VR 2000 BRICK LED WITH OPAL LENS & PAINTED PERIMETER FLAT BLACK.  
Light Source: (56) NICHIA 4000K LEDS  
1FS402256M8404  
Ballast/Driver: (1) OSRAM ELECTRONIC DRIVER @ 240 mA  
OT25UNVDIM1F0240

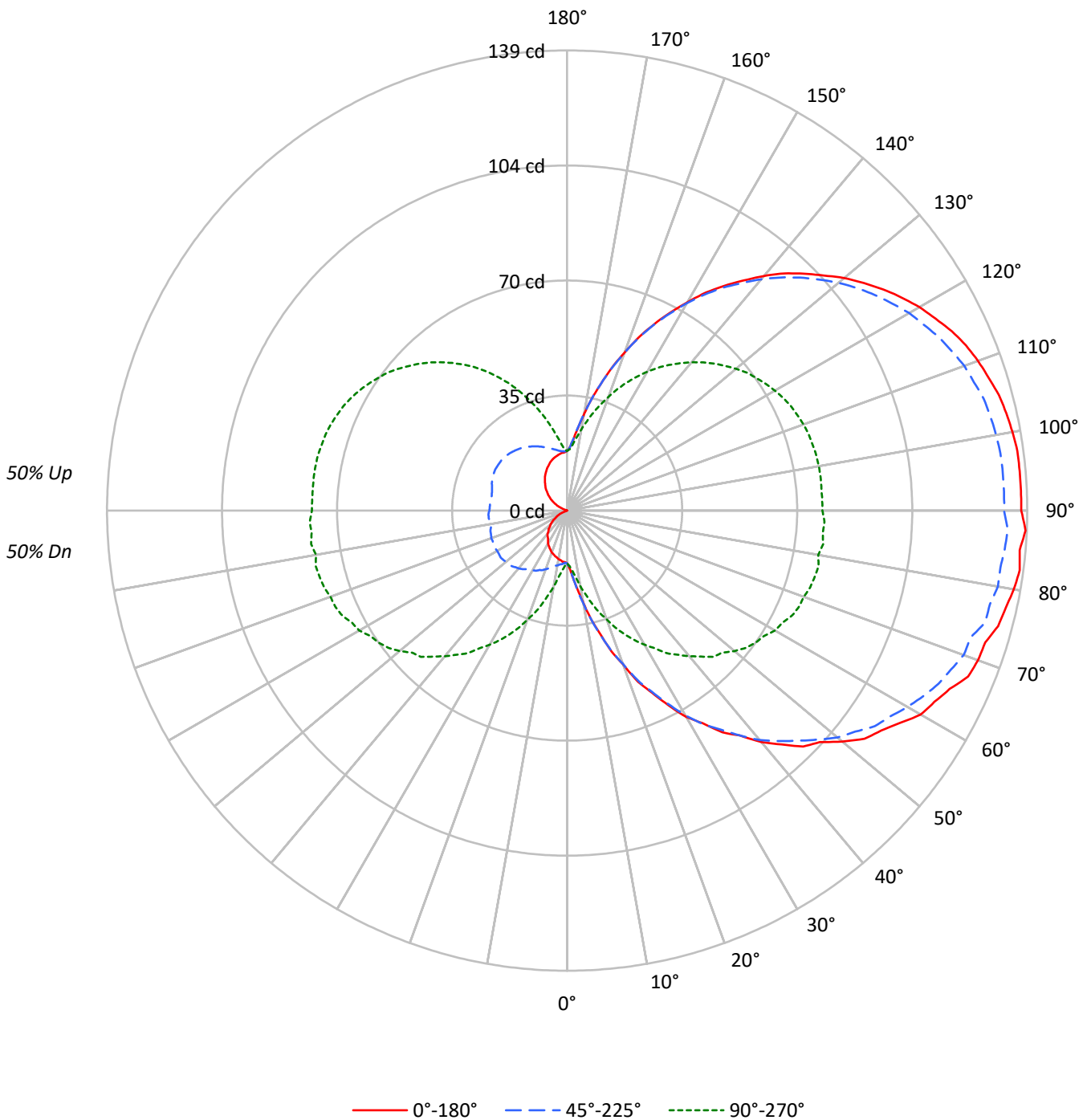
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 796.4 lumens  
Efficiency: N/A  
Efficacy: 68.1 lumens/watt  
Spacing Criteria (0/90/45): 3.46 / 3.68 / 3.55  
Luminous Opening: Rectangular w/ Sides (W: 0.35' x L: 0.29' x H: 0.67')  
CIE Type: General Diffuse  
  
Input Watts (W): 11.7  
Input Voltage (V): 120.0  
Input Current (A<sub>in</sub>): 0.0983  
Voltage Rise (V): NR  
Power Factor: 0.9943  
Total Harmonic Distortion (THDi): 6.60%  
Frequency (hertz): 60  
Stabilization Time: 0.5 HR  
Operation Time: 7.0 HR  
Ambient Temperature (°C): 25.4  
Test Distance: 25 FT

TEST NUMBER: G1-1710-337-14

CATALOG NUMBER: B95-PP-BLK-LD4-12W-40-OPL-120-EDC1

### Luminous Intensity Polar Plot





TEST NUMBER: G1-1710-337-14

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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	86	80	75	84	79	73	69	65	61	57	53	50	47	41	39	37	31
2	82	72	64	57	75	66	58	52	54	48	43	43	39	35	33	30	27	22
3	74	62	52	45	67	56	48	41	46	40	34	37	32	27	28	24	21	16
4	67	53	44	37	60	49	40	34	40	33	28	32	26	22	24	20	17	13
5	61	47	37	30	55	43	34	28	35	28	23	28	22	18	21	17	13	10
6	55	42	32	25	50	38	30	23	31	24	19	25	19	15	19	14	11	8
7	51	37	28	22	46	34	26	20	28	21	16	22	17	13	17	13	10	7
8	47	33	25	19	43	31	23	17	25	19	14	20	15	11	15	11	8	6
9	44	30	22	16	40	28	20	15	23	17	12	18	13	10	14	10	7	5
10	41	28	20	14	37	25	18	13	21	15	11	17	12	9	13	9	6	4

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

	0°	90°	180°
0°	1657	1657	1657
5°	1770	1644	1351
10°	2142	1851	1124
15°	2582	2094	950
20°	2996	2303	817
25°	3378	2529	696
30°	3735	2698	597
35°	4001	2887	494
40°	4256	3027	429
45°	4521	3195	354
50°	4723	3299	283
55°	4933	3423	222
60°	5182	3546	155
65°	5327	3671	100
70°	5528	3757	25
75°	5695	3883	0
80°	5888	3958	0
85°	6047	4115	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	1.9	0.2
10°-20°	8.1	1.0
20°-30°	18.4	2.3
30°-40°	31.6	4.0
40°-50°	45.9	5.8
50°-60°	59.6	7.5
60°-70°	70.9	8.9
70°-80°	78.4	9.8
80°-90°	82.0	10.3
90°-100°	81.6	10.2
100°-110°	78.2	9.8
110°-120°	71.1	8.9
120°-130°	60.1	7.6
130°-140°	46.6	5.9
140°-150°	32.4	4.1
150°-160°	19.1	2.4
160°-170°	8.5	1.1
170°-180°	2.0	0.3
0°-30°	28.4	3.6
0°-40°	60.0	7.5
0°-60°	165.5	20.8
0°-90°	396.7	49.8
90°-120°	230.9	29.0
90°-150°	370.0	46.5
90°-180°	400.0	50.2
0°-180°	796.4	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	16	16	16	16	16	
5°	20	20	18	16	16	2
15°	39	39	29	18	14	11
25°	61	60	41	20	12	29
35°	82	81	53	22	10	51
45°	101	98	62	24	8	78
55°	116	114	70	25	5	104
65°	128	124	75	25	2	127
75°	135	131	77	24	0	142
85°	137	133	78	24	0	112
90°	137	132	77	24	0	75
95°	137	132	77	23	0	112
105°	135	130	77	24	0	143
115°	128	124	75	25	3	127
125°	116	114	70	25	6	104
135°	101	100	63	24	9	78
145°	83	82	54	23	12	52
155°	62	62	43	21	14	29
165°	40	40	31	19	16	12
175°	22	22	20	18	18	2
180°	18	18	18	18	18	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	15.9	15.9	15.9	15.9	15.9	15.9	15.9	15.9	15.9	15.9	15.9
2.5°	17.5	17.6	17.6	17.5	17.7	17.5	17.3	17.1	16.9	16.8	16.8
5°	20.3	20.5	20.2	20.2	20.4	20.2	20.0	19.6	19.1	18.6	18.3
7.5°	24.0	24.5	24.3	24.3	24.5	24.4	23.8	22.9	22.0	21.2	20.4
10°	28.4	28.4	28.7	28.9	29.1	28.7	27.7	26.4	25.3	24.0	23.3
12.5°	33.7	33.8	33.5	33.7	34.0	33.8	32.4	31.0	28.9	26.9	26.0
15°	38.6	39.1	38.7	39.3	39.5	38.8	37.5	35.1	32.8	30.2	29.2
17.5°	44.6	44.4	44.1	44.7	44.8	44.4	42.6	39.8	36.7	33.4	32.3
20°	49.5	50.1	50.1	50.1	50.7	49.3	47.4	44.6	40.6	36.3	35.0
22.5°	56.0	55.7	55.2	55.9	56.3	55.4	52.8	49.1	44.4	40.2	38.3
25°	60.7	60.7	60.7	61.2	61.7	60.3	57.8	53.5	48.1	43.5	41.3
27.5°	66.3	66.3	65.9	66.5	66.6	65.7	62.2	57.6	52.5	46.3	44.1
30°	72.0	71.5	71.1	71.9	72.5	71.4	67.8	62.1	56.4	49.8	46.8
32.5°	76.1	76.2	75.8	76.8	78.1	76.5	72.1	66.1	59.7	52.5	49.3
35°	81.8	81.9	80.7	81.6	82.4	80.7	76.8	70.7	63.3	55.7	52.6
37.5°	85.6	86.5	85.2	86.3	87.5	85.6	81.2	74.5	66.7	57.7	54.9
40°	91.3	91.1	90.7	90.3	91.9	90.5	86.0	77.9	69.6	61.2	57.4
42.5°	95.8	95.2	94.7	95.2	95.8	94.4	89.3	82.3	72.7	63.0	59.8
45°	100.8	100.3	99.0	98.9	100.7	98.3	93.3	85.4	75.8	65.6	62.5
47.5°	103.5	103.8	102.7	103.4	103.6	102.4	97.4	89.7	78.6	68.0	63.5
50°	108.5	108.7	106.8	107.0	109.1	106.6	101.0	91.7	81.8	70.1	66.0
52.5°	113.2	112.6	110.2	110.3	111.9	109.7	103.2	95.6	84.1	72.0	68.1
55°	115.8	115.1	113.2	113.4	114.4	113.5	106.6	98.2	86.0	74.2	69.5
57.5°	119.3	119.7	117.1	116.9	118.9	115.7	109.3	100.3	88.8	75.4	70.5
60°	123.3	121.7	119.3	118.7	120.9	118.7	112.0	102.7	90.4	76.8	72.5
62.5°	125.1	125.0	123.0	123.3	124.4	121.3	115.3	104.6	91.7	79.3	73.3
65°	127.5	127.4	124.3	124.6	125.4	123.8	116.7	107.1	93.6	79.9	75.0
67.5°	131.1	129.9	127.8	126.5	129.4	125.5	119.3	109.0	95.5	81.0	75.8
70°	132.1	131.3	128.0	128.1	129.4	127.5	120.7	109.6	96.4	81.1	76.1
72.5°	132.4	134.2	131.1	129.7	131.9	127.7	122.0	111.1	97.1	82.0	77.0
75°	134.8	135.1	131.5	131.1	133.2	130.7	122.5	112.4	98.1	82.1	77.4
77.5°	135.7	135.3	132.9	131.6	133.9	130.8	124.2	112.5	98.3	83.7	77.8
80°	137.0	136.3	133.2	132.6	133.9	132.1	125.4	114.1	99.2	83.3	77.0
82.5°	137.9	136.3	133.5	133.7	134.3	132.0	126.1	114.0	100.1	83.4	78.0
85°	137.2	137.4	133.8	133.2	136.0	132.7	125.0	113.9	99.6	84.0	77.5
87.5°	138.6	137.1	133.7	132.1	135.1	133.2	125.2	114.9	99.2	84.2	77.8
90°	137.2	136.8	133.7	132.9	134.5	132.0	124.6	113.3	98.4	82.8	77.1
92.5°	137.2	136.8	133.9	133.2	134.7	132.1	124.7	113.4	98.5	82.9	77.1
95°	137.2	136.8	133.8	133.1	134.6	132.1	124.9	113.5	98.6	83.0	77.1
97.5°	137.2	136.6	133.6	133.1	134.6	132.0	124.8	113.4	98.5	83.0	77.2
100°	136.6	136.3	133.2	132.5	134.2	131.6	124.4	113.1	98.3	82.9	77.2
102.5°	135.9	135.5	132.6	132.1	133.6	131.0	123.7	112.6	98.0	82.8	77.1
105°	135.0	134.7	132.0	131.3	132.8	130.3	123.1	111.9	97.5	82.5	76.8
107.5°	133.5	133.2	130.5	129.8	131.5	128.9	121.9	111.0	96.8	82.0	76.5
110°	132.1	131.9	129.2	128.8	130.1	127.7	120.8	109.9	95.8	81.4	76.0



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
112.5°	130.4	129.9	127.5	126.9	128.3	125.8	119.3	108.5	94.8	80.7	75.3
115°	128.2	127.8	125.4	124.9	126.4	123.9	117.3	106.9	93.4	79.7	74.6
117.5°	125.5	125.0	122.8	122.6	123.8	121.5	115.3	105.0	92.1	78.7	73.6
120°	122.9	122.5	120.4	120.3	121.5	119.3	112.9	103.1	90.4	77.4	72.5
122.5°	119.8	119.5	117.6	117.4	118.9	116.4	110.4	100.8	88.5	75.9	71.2
125°	116.5	116.3	114.4	114.6	115.8	113.5	107.6	98.3	86.4	74.4	69.8
127.5°	112.9	112.7	111.0	111.3	112.6	110.4	104.6	95.6	84.2	72.7	68.4
130°	109.3	109.1	107.6	107.7	109.2	107.0	101.4	92.8	81.7	70.7	66.6
132.5°	105.1	105.2	103.9	104.3	105.4	103.3	98.0	89.7	79.2	68.8	64.7
135°	101.2	101.1	99.8	100.4	101.5	99.5	94.3	86.3	76.5	66.6	62.8
137.5°	97.2	96.9	95.9	96.2	97.4	95.5	90.6	83.0	73.5	64.2	60.7
140°	92.5	92.3	91.5	92.0	93.0	91.2	86.6	79.2	70.6	61.8	58.5
142.5°	87.6	87.6	86.9	87.5	88.7	86.6	82.3	75.6	67.3	59.1	56.1
145°	82.9	82.9	82.3	83.2	83.8	82.2	77.9	71.6	63.9	56.6	53.7
147.5°	78.1	77.8	77.5	78.2	79.0	77.4	73.4	67.6	60.5	53.7	51.2
150°	72.7	72.8	72.5	73.2	73.7	72.3	68.7	63.4	57.0	50.7	48.4
152.5°	67.4	67.4	67.3	68.1	68.6	67.0	63.7	59.0	53.1	47.8	45.6
155°	62.1	62.0	62.0	62.7	63.1	61.9	58.7	54.6	49.5	44.5	42.7
157.5°	56.7	56.6	56.4	57.1	57.5	56.5	53.6	50.0	45.5	41.4	39.7
160°	50.8	50.9	51.0	51.6	51.8	50.7	48.6	45.4	41.7	38.1	36.6
162.5°	45.5	45.4	45.4	45.9	46.0	45.3	43.4	40.7	37.6	34.9	33.6
165°	39.8	39.9	39.8	40.4	40.5	39.8	38.4	36.4	33.9	31.7	30.6
167.5°	34.7	34.6	34.8	34.9	35.1	34.8	33.6	32.0	30.2	28.3	27.7
170°	29.7	29.8	29.8	30.1	30.1	29.8	29.0	28.0	26.8	25.4	24.9
172.5°	25.2	25.4	25.4	25.5	25.7	25.4	24.9	24.3	23.6	22.7	22.4
175°	21.6	21.7	21.8	21.8	21.8	21.8	21.6	21.2	20.8	20.4	20.2
177.5°	19.2	19.2	19.1	19.2	19.1	19.1	19.0	18.9	18.8	18.7	18.6
180°	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0



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**CANDELA DISTRIBUTION (continued):**

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	15.9	15.9	15.9	15.9	15.9	15.9	15.9	15.9	15.9	15.9
2.5°	16.7	16.3	16.1	16.0	15.8	15.8	15.7	15.7	15.7	15.6
5°	18.3	17.8	17.0	16.3	16.2	15.6	15.4	15.4	15.4	15.5
7.5°	20.3	19.4	18.5	17.2	16.4	15.7	15.4	15.3	15.2	15.1
10°	22.8	21.2	19.8	18.1	16.8	15.6	15.0	14.8	14.9	14.9
12.5°	25.2	23.6	21.3	19.1	17.1	15.5	14.6	14.7	14.4	14.5
15°	28.0	25.6	23.2	20.4	17.8	15.6	14.3	14.1	14.1	14.2
17.5°	30.9	28.2	24.9	21.6	18.3	15.4	14.0	13.9	13.9	13.8
20°	34.0	30.4	26.9	23.0	18.8	15.4	13.5	13.4	13.4	13.5
22.5°	36.6	32.9	28.7	23.9	19.5	15.3	13.3	12.9	13.0	13.0
25°	39.6	35.4	30.4	25.1	19.8	15.3	12.6	12.5	12.4	12.5
27.5°	41.8	37.7	32.6	26.5	20.5	15.1	12.1	12.0	11.9	12.0
30°	45.0	40.2	33.9	27.9	20.8	15.2	11.7	11.5	11.4	11.5
32.5°	47.3	42.2	35.9	28.7	21.6	14.9	11.0	10.9	10.7	10.7
35°	50.1	44.0	37.5	29.7	21.6	14.7	10.5	10.1	10.2	10.1
37.5°	52.3	46.2	39.3	30.8	22.3	14.5	10.0	9.7	9.6	9.7
40°	54.7	48.2	40.6	31.8	22.8	14.4	9.3	9.3	9.0	9.2
42.5°	56.5	49.6	41.9	32.9	23.2	14.2	8.6	8.5	8.3	8.3
45°	59.2	51.8	43.5	33.8	23.7	13.9	8.2	8.0	7.8	7.9
47.5°	60.8	53.7	44.6	34.7	24.0	13.8	7.5	7.2	7.2	7.0
50°	62.4	54.5	45.6	35.2	24.1	13.5	6.9	6.5	6.5	6.5
52.5°	64.1	56.2	46.9	36.1	24.4	13.2	6.2	5.9	5.8	5.8
55°	66.1	57.4	47.5	36.4	24.6	12.9	5.4	5.2	5.1	5.2
57.5°	67.2	58.3	48.9	37.1	24.4	12.4	4.7	4.4	4.4	4.2
60°	68.1	59.7	49.1	37.5	24.4	11.9	4.0	3.6	3.7	3.7
62.5°	69.5	60.6	49.7	37.6	24.5	11.5	3.0	2.8	3.0	3.0
65°	70.2	61.3	50.6	38.3	24.7	11.1	2.3	2.0	2.4	2.4
67.5°	71.6	62.3	50.9	37.9	24.3	10.4	1.5	1.4	1.4	1.6
70°	71.5	62.7	51.0	38.5	24.4	10.0	0.7	0.4	0.5	0.6
72.5°	72.3	63.0	51.6	38.4	24.1	9.6	0.1	0.0	0.0	0.0
75°	72.5	63.4	51.7	38.5	24.0	9.2	0.0	0.0	0.0	0.0
77.5°	72.9	63.3	51.8	38.0	23.6	8.9	0.0	0.0	0.0	0.0
80°	73.2	63.5	51.5	38.4	23.7	8.9	0.0	0.0	0.0	0.0
82.5°	73.2	63.5	51.9	38.3	23.7	9.1	0.0	0.0	0.0	0.0
85°	73.8	63.4	51.7	38.3	23.8	9.0	0.0	0.0	0.0	0.0
87.5°	73.2	63.6	51.9	38.5	23.8	9.0	0.0	0.0	0.0	0.0
90°	72.7	63.0	51.3	38.0	23.5	9.1	0.0	0.0	0.0	0.0
92.5°	72.8	63.0	51.2	37.9	23.4	9.0	0.0	0.0	0.0	0.0
95°	72.9	62.9	51.1	37.8	23.4	9.0	0.0	0.0	0.0	0.0
97.5°	72.9	63.0	51.1	37.7	23.2	8.9	0.0	0.0	0.0	0.0
100°	72.8	62.9	51.1	37.8	23.2	8.9	0.0	0.0	0.0	0.0
102.5°	72.8	62.9	51.2	37.8	23.3	8.9	0.0	0.0	0.0	0.0
105°	72.6	62.8	51.2	38.0	23.5	9.1	0.0	0.0	0.0	0.0
107.5°	72.3	62.6	51.1	38.1	23.8	9.6	0.2	0.0	0.0	0.0
110°	71.8	62.3	50.9	38.1	24.2	10.3	1.0	0.4	0.4	0.4





TEST NUMBER: G1-1710-337-14

CATALOG NUMBER: B95-PP-BLK-LD4-12W-40-OPL-120-EDC1

**CANDELA DISTRIBUTION (continued):**

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
112.5°	71.3	61.9	50.7	38.1	24.5	11.0	2.1	1.6	1.4	1.5
115°	70.6	61.4	50.4	38.1	24.7	11.6	3.1	2.6	2.5	2.6
117.5°	69.7	60.7	50.0	37.9	24.9	12.2	3.9	3.6	3.5	3.5
120°	68.7	60.0	49.4	37.7	25.0	12.7	4.8	4.4	4.3	4.3
122.5°	67.6	59.0	48.9	37.3	25.0	13.1	5.6	5.3	5.2	5.2
125°	66.3	58.0	48.1	36.9	25.0	13.6	6.4	6.1	6.0	6.0
127.5°	64.9	56.9	47.3	36.5	25.0	14.0	7.1	6.9	6.7	6.7
130°	63.3	55.5	46.3	35.9	24.8	14.3	7.8	7.6	7.5	7.5
132.5°	61.6	54.2	45.3	35.3	24.7	14.7	8.5	8.3	8.2	8.2
135°	59.8	52.6	44.1	34.6	24.5	15.0	9.3	9.0	8.9	9.0
137.5°	57.9	51.1	42.9	33.8	24.2	15.3	10.0	9.7	9.7	9.7
140°	55.8	49.3	41.6	33.0	23.9	15.6	10.7	10.5	10.4	10.3
142.5°	53.5	47.5	40.2	32.0	23.6	15.8	11.3	11.2	11.0	11.0
145°	51.2	45.5	38.7	31.1	23.2	16.1	12.0	11.8	11.7	11.7
147.5°	48.9	43.5	37.1	30.1	22.8	16.3	12.6	12.5	12.4	12.4
150°	46.3	41.3	35.4	29.0	22.3	16.5	13.3	13.1	13.0	13.0
152.5°	43.7	39.1	33.7	27.8	21.9	16.6	13.8	13.7	13.6	13.6
155°	41.0	36.8	32.0	26.7	21.4	16.8	14.4	14.3	14.2	14.2
157.5°	38.2	34.5	30.2	25.5	20.9	16.9	14.9	14.8	14.8	14.7
160°	35.4	32.1	28.4	24.3	20.4	17.1	15.4	15.3	15.2	15.3
162.5°	32.5	29.7	26.5	23.2	19.9	17.2	15.9	15.8	15.8	15.8
165°	29.6	27.4	24.7	22.0	19.4	17.3	16.3	16.2	16.2	16.2
167.5°	26.9	25.2	23.1	21.0	19.0	17.4	16.7	16.6	16.6	16.6
170°	24.3	23.0	21.5	20.0	18.6	17.5	17.0	16.9	16.9	16.9
172.5°	22.0	21.1	20.1	19.1	18.2	17.6	17.3	17.2	17.2	17.2
175°	20.0	19.5	19.0	18.4	18.0	17.7	17.5	17.5	17.5	17.5
177.5°	18.5	18.4	18.2	18.0	17.9	17.8	17.7	17.7	17.7	17.6
180°	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0

(END OF REPORT)