

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: G1-1710-337-9

Luminaire Tested: **B95-VE-BLK-LD4-8W-40-CL-120-EDC1**

Test Date: 11/20/17



**Test Information**

Test Method: LM-79-08  
Report Number: G1-1710-337-9  
Test Lab: INNOVATION CENTER(G1)  
Test Date: 11/20/17  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: B95-VE-BLK-LD4-8W-40-CL-120-EDC1  
Description: VR 2000 BRICK LED WITH CLEAR LENS & VERTICAL EYELID FLAT BLACK  
Light Source: (56) NICHIA 4000K LEDS  
1FS402256M8404  
Ballast/Driver: (1) OSRAM ELECTRONIC DRIVER @ 150mA  
OT25UNVDIM1F0150

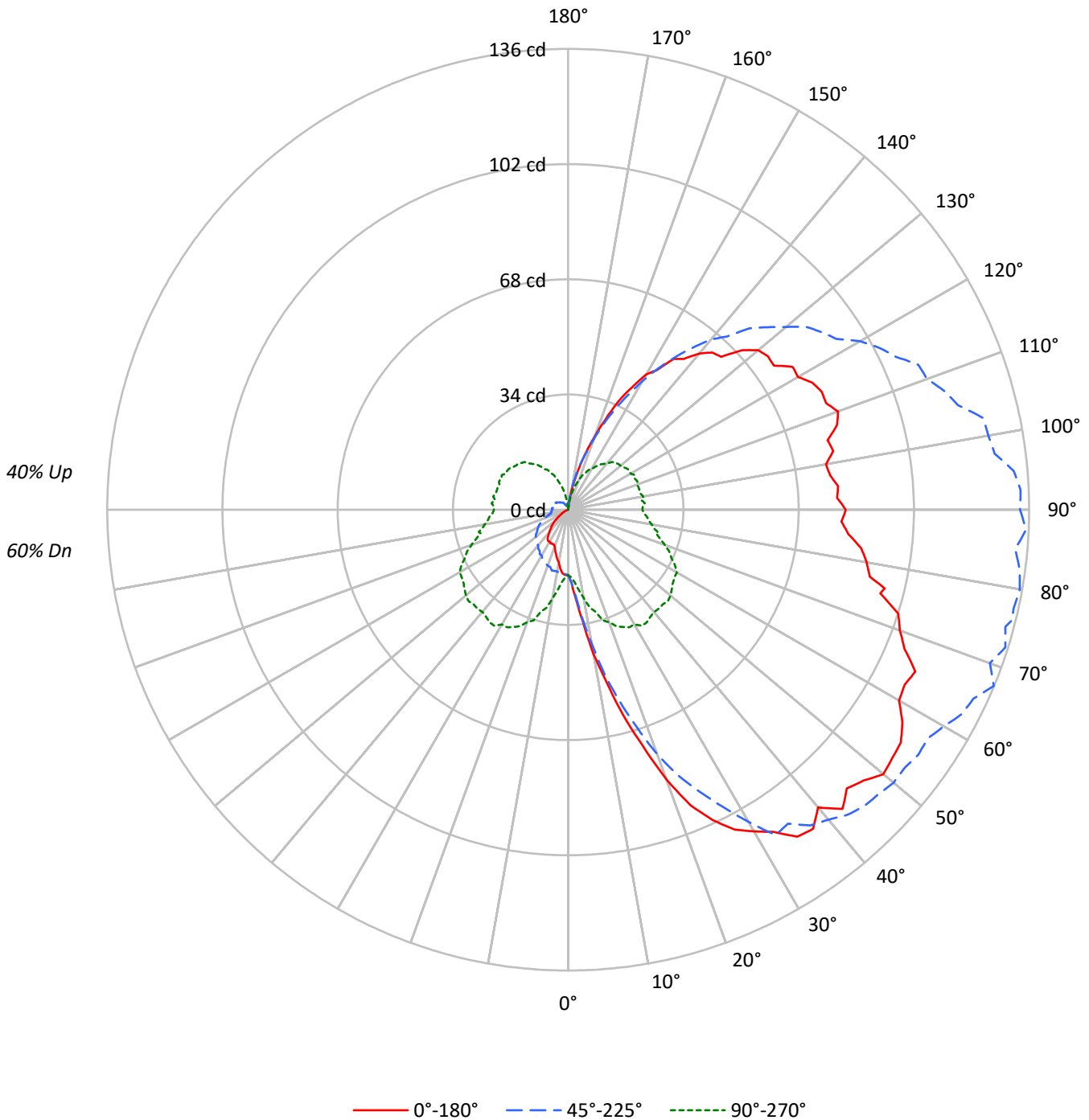
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 571.3 lumens  
Efficiency: N/A  
Efficacy: 73.1 lumens/watt  
Spacing Criteria (0/90/45): 3.08 / 2.48 / 3.18  
Luminous Opening: Rectangular w/ Sides (W: 0.35' x L: 0.29' x H: 0.67')  
CIE Type: General Diffuse  
  
Input Watts (W): 7.82  
Input Voltage (V): 120.0  
Input Current (A<sub>in</sub>): 0.0664  
Voltage Rise (V): NR  
Power Factor: 0.9867  
Total Harmonic Distortion (THDi): 10.3%  
Frequency (hertz): 60  
Stabilization Time: 0.5 HR  
Operation Time: 7.0 HR  
Ambient Temperature (°C): 24.9  
Test Distance: 25 FT

TEST NUMBER: G1-1710-337-9

CATALOG NUMBER: B95-VE-BLK-LD4-8W-40-CL-120-EDC1

### Luminous Intensity Polar Plot





TEST NUMBER: G1-1710-337-9

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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	109	109	109	109	102	102	102	102	89	89	89	76	76	76	65	65	65	60
1	95	89	83	78	88	82	77	73	71	67	63	60	57	54	50	48	45	40
2	85	75	66	59	78	69	62	56	59	53	48	50	45	41	41	38	34	30
3	76	64	55	47	70	59	51	44	50	44	38	42	37	33	35	31	27	23
4	69	56	46	38	63	51	43	36	44	37	31	37	31	27	30	26	22	18
5	63	49	39	32	58	45	36	30	39	31	26	32	27	22	26	22	18	15
6	57	43	34	27	53	40	32	25	34	27	22	29	23	19	24	19	15	12
7	53	39	30	23	49	36	28	22	31	24	19	26	20	16	21	17	13	10
8	49	35	26	20	45	32	24	19	28	21	16	23	18	14	19	15	11	9
9	45	32	23	17	42	29	22	16	25	19	14	21	16	12	18	13	10	8
10	42	29	21	15	39	27	19	14	23	17	13	20	14	11	16	12	9	7

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

	0°	90°	180°
0°	2011	2011	2011
5°	2319	1922	1647
10°	3265	2105	1192
15°	4195	2230	917
20°	5127	2323	702
25°	5627	2339	618
30°	5685	2254	565
35°	5762	2223	519
40°	5347	2078	401
45°	5216	2019	309
50°	5285	1969	213
55°	5104	1857	132
60°	4736	1810	88
65°	4721	1645	46
70°	4357	1496	8
75°	4026	1345	0
80°	3842	1285	0
85°	3658	1237	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	2.3	0.4
10°-20°	10.6	1.9
20°-30°	23.7	4.1
30°-40°	36.8	6.4
40°-50°	46.4	8.1
50°-60°	53.2	9.3
60°-70°	56.8	9.9
70°-80°	56.8	9.9
80°-90°	55.2	9.7
90°-100°	53.0	9.3
100°-110°	48.9	8.6
110°-120°	42.9	7.5
120°-130°	34.5	6.0
130°-140°	25.0	4.4
140°-150°	15.7	2.8
150°-160°	7.4	1.3
160°-170°	2.1	0.4
170°-180°	0.1	0.0
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0°-30°	36.6	6.4
0°-40°	73.4	12.8
0°-60°	172.9	30.3
0°-90°	341.6	59.8
90°-120°	144.9	25.4
90°-150°	220.1	38.5
90°-180°	230.0	40.3
0°-180°	571.3	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	19	19	19	19	19	
5°	27	26	21	19	19	3
15°	63	58	31	19	14	18
25°	101	92	38	17	11	47
35°	118	113	40	15	11	73
45°	116	124	40	13	7	92
55°	120	126	38	11	3	106
65°	113	132	34	9	1	109
75°	95	134	27	6	0	102
85°	83	132	23	5	0	70
90°	82	133	22	5	0	44
95°	80	132	23	5	0	64
105°	79	119	22	5	0	86
115°	82	107	22	4	0	81
125°	74	91	21	4	0	68
135°	64	76	20	3	0	51
145°	54	55	16	2	0	34
155°	36	33	12	1	0	17
165°	13	14	7	0	0	4
175°	1	0	0	0	0	0
180°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	39°	45°	55°	65°	75°	85°
0°	19.3	19.3	19.3	19.3	19.3	19.3	19.3	19.3	19.3	19.3	19.3
2.5°	21.4	22.1	21.8	21.6	21.5	21.5	21.5	21.0	20.8	20.5	20.3
5°	26.6	26.8	26.8	26.2	25.9	25.8	25.6	25.0	23.8	23.0	21.6
7.5°	33.4	34.0	34.1	33.7	33.3	32.9	32.5	30.3	28.4	26.2	24.0
10°	43.3	43.1	43.2	43.6	42.3	41.1	40.2	37.0	34.1	30.4	27.7
12.5°	51.9	52.2	52.5	52.9	52.0	51.2	49.8	45.4	39.6	34.9	30.2
15°	62.7	63.9	64.2	63.6	63.0	59.9	58.4	51.2	45.8	38.9	33.8
17.5°	73.0	75.4	73.4	74.4	71.7	70.6	67.3	59.3	51.1	42.6	36.8
20°	84.7	84.5	84.2	84.3	81.6	81.7	76.8	68.9	56.1	46.8	37.9
22.5°	94.4	94.1	95.0	94.8	92.5	89.0	84.9	73.9	62.6	50.1	41.1
25°	101.1	103.9	102.1	101.4	100.5	100.0	91.8	81.3	66.1	52.9	42.2
27.5°	106.4	107.9	110.3	110.8	108.7	106.8	98.9	86.3	70.3	56.3	42.7
30°	109.6	112.0	114.1	116.3	115.4	113.5	106.4	90.8	73.9	57.2	44.6
32.5°	112.7	114.8	117.6	123.6	121.2	116.9	113.8	94.0	77.1	60.2	45.1
35°	117.8	114.7	119.2	126.7	124.2	124.6	113.1	99.1	79.6	60.4	45.7
37.5°	118.7	117.5	121.2	127.8	127.4	125.3	117.4	99.6	78.2	61.4	46.1
40°	114.7	116.0	120.8	127.6	133.1	127.5	119.4	101.1	80.3	61.0	46.0
42.5°	119.8	119.2	124.1	132.1	135.2	129.9	122.1	102.5	80.7	61.3	46.0
45°	116.3	117.0	123.9	128.8	137.2	129.8	123.6	103.9	80.2	62.9	45.1
47.5°	118.3	117.1	123.2	132.3	140.1	132.2	124.2	104.3	81.0	61.4	44.4
50°	121.4	120.9	122.5	133.1	139.2	135.1	125.3	105.7	81.8	63.2	44.1
52.5°	120.5	121.4	120.3	134.2	138.8	137.4	125.1	106.6	84.3	63.0	45.0
55°	119.8	119.3	122.6	135.0	137.1	136.8	126.1	104.3	83.0	61.6	43.9
57.5°	116.9	116.0	125.3	137.8	141.0	137.0	125.7	108.1	83.3	63.4	44.1
60°	112.7	116.9	125.1	135.2	139.3	137.8	127.9	105.4	84.0	62.3	42.4
62.5°	111.9	113.9	124.8	134.1	135.9	141.0	130.8	107.8	81.8	61.6	41.8
65°	113.0	111.8	125.0	133.3	138.4	140.6	131.9	110.0	83.6	60.1	40.3
67.5°	107.4	107.3	121.5	130.5	139.2	140.4	135.9	108.6	81.9	58.4	37.4
70°	104.1	105.6	119.8	130.9	140.7	142.3	132.4	109.6	80.5	56.5	36.6
72.5°	102.1	101.9	115.7	132.5	139.2	146.2	135.2	109.8	80.4	55.1	34.5
75°	95.3	100.7	114.2	132.9	137.4	146.7	133.5	108.6	78.3	54.0	33.0
76°	96.2	99.0	111.9	132.5	140.1	146.8	134.9	108.1	77.5	51.9	32.6
77.5°	91.1	95.4	112.1	130.6	139.9	143.7	134.6	107.2	76.6	51.8	31.7
80°	89.4	94.1	107.5	130.6	139.9	143.4	135.3	106.1	75.7	50.3	30.4
82.5°	87.2	89.0	105.5	131.3	136.4	143.6	134.3	106.7	76.3	48.8	29.2
85°	83.0	88.1	105.8	128.2	139.0	139.6	132.4	105.5	74.7	48.9	28.7
87.5°	80.7	84.8	104.7	127.7	137.9	137.8	135.2	102.5	74.0	47.3	28.1
90°	81.9	83.1	102.1	123.7	134.2	138.3	133.3	105.2	73.0	46.7	27.1
92.5°	79.4	84.9	101.6	124.0	135.4	136.9	133.6	104.5	73.9	45.9	27.0
95°	79.9	81.5	100.7	123.5	133.4	135.5	131.9	102.4	72.8	46.4	27.6
97.5°	77.9	83.8	98.9	119.1	127.5	134.1	126.9	101.9	72.5	45.2	27.2
100°	77.2	82.2	100.1	115.0	129.4	133.2	125.9	100.4	72.5	46.5	27.8
102.5°	80.1	82.9	96.4	114.6	124.9	129.6	125.3	99.2	71.0	44.9	27.6
105°	79.2	83.0	98.1	111.1	122.4	127.3	119.1	96.8	70.9	44.7	27.5
107.5°	83.2	85.6	97.9	109.3	118.5	123.3	116.4	93.8	68.7	44.6	26.9



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	15°	25°	35°	39°	45°	55°	65°	75°	85°
110°	84.7	82.3	96.9	108.2	117.9	122.9	112.7	93.4	67.5	44.8	27.1
112.5°	82.3	81.9	96.5	106.6	113.3	117.9	111.8	91.8	66.4	44.2	27.1
115°	82.5	80.7	91.4	103.2	112.5	112.8	106.7	88.6	63.6	43.7	26.7
117.5°	81.2	81.0	90.7	104.0	108.6	110.1	103.5	84.2	62.9	43.5	26.9
120°	78.3	79.2	87.2	99.7	107.4	108.6	99.4	82.9	61.2	41.2	25.7
122.5°	78.5	78.3	83.6	95.2	104.1	101.1	93.8	81.1	59.8	40.8	26.1
125°	74.1	75.0	79.3	92.8	99.6	98.9	91.3	75.6	57.1	39.7	25.8
127.5°	74.3	75.0	77.9	88.0	94.7	92.3	88.6	72.0	55.0	37.8	25.6
130°	73.2	71.1	73.4	82.0	89.6	87.2	83.9	69.2	53.7	37.4	24.4
132.5°	69.7	69.1	73.3	79.7	85.5	84.2	79.7	64.4	50.5	36.2	24.2
135°	63.8	65.0	69.5	75.0	79.7	79.4	75.7	61.0	47.2	34.3	23.4
137.5°	62.9	61.3	65.5	71.3	76.5	73.3	69.3	56.8	44.7	32.9	22.7
140°	60.2	58.6	61.5	69.7	70.1	68.3	65.5	54.8	41.6	31.8	21.9
142.5°	56.1	57.2	58.3	64.9	66.8	64.9	60.2	49.9	39.6	28.8	20.2
145°	54.3	52.6	56.2	57.3	60.1	58.5	54.9	46.2	36.5	27.4	19.3
147.5°	48.9	49.4	50.8	52.9	53.6	52.5	49.4	42.3	33.4	25.3	18.2
150°	46.1	45.6	46.6	47.0	46.7	46.0	43.8	37.6	30.1	23.2	16.4
152.5°	40.7	41.3	39.8	40.1	40.6	39.3	38.1	33.6	27.2	21.1	15.5
155°	35.6	34.5	34.3	35.1	34.7	34.5	32.8	28.3	23.9	18.8	14.0
157.5°	29.0	28.4	27.8	29.2	28.3	28.3	27.5	23.8	20.1	16.4	12.5
160°	23.2	22.6	23.0	23.0	23.0	22.9	22.3	20.2	17.0	14.0	10.9
162.5°	18.1	17.9	17.4	18.0	18.9	18.2	17.4	16.1	14.1	11.6	9.2
165°	13.2	13.2	13.4	13.9	14.4	13.8	14.0	12.7	11.0	9.3	7.4
167.5°	9.2	9.2	9.3	10.1	10.1	10.4	10.0	9.6	8.4	7.2	6.0
170°	5.7	5.5	6.0	6.3	6.6	6.7	6.6	6.3	5.7	5.0	3.9
172.5°	1.9	1.9	2.3	2.9	3.7	3.5	3.8	3.5	3.3	2.9	2.5
175°	0.6	0.5	0.4	0.3	0.3	0.2	0.2	0.1	0.2	0.4	0.2
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CATALOG NUMBER: B95-VE-BLK-LD4-8W-40-CL-120-EDC1

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	19.3	19.3	19.3	19.3	19.3	19.3	19.3	19.3	19.3	19.3	19.3
2.5°	20.0	19.5	19.5	19.3	19.3	19.0	18.8	18.9	19.0	18.6	19.3
5°	21.4	21.2	20.8	19.8	19.5	19.1	19.1	18.4	18.6	18.3	18.9
7.5°	23.9	22.9	22.0	21.1	20.1	19.3	18.2	17.7	17.4	17.5	17.6
10°	26.5	25.6	23.8	22.4	20.4	18.5	17.6	16.3	16.2	15.9	15.8
12.5°	29.6	27.9	25.3	23.3	20.5	18.5	17.0	15.5	15.0	15.0	14.9
15°	31.1	30.0	27.3	24.1	21.1	18.6	16.0	14.6	13.8	13.5	13.7
17.5°	34.3	32.3	28.1	25.0	21.0	17.7	15.2	14.1	13.2	12.6	12.7
20°	35.3	33.6	29.4	25.2	21.2	17.6	14.3	12.9	12.2	11.8	11.6
22.5°	37.2	34.2	30.1	25.9	21.5	17.2	13.9	11.8	11.4	10.9	11.1
25°	38.2	34.7	30.8	26.1	21.1	16.9	13.2	11.1	11.1	10.8	11.1
27.5°	39.1	36.1	31.8	26.2	20.8	16.5	12.5	10.9	10.8	11.0	11.2
30°	39.1	36.7	31.7	26.7	20.9	15.6	12.0	10.9	11.2	10.8	10.9
32.5°	40.6	36.9	32.0	26.9	21.0	15.6	12.1	10.9	10.9	10.8	11.0
35°	40.5	37.1	32.6	26.5	20.5	14.7	11.8	10.7	10.6	10.3	10.6
37.5°	39.8	36.7	32.2	26.0	19.4	14.5	11.5	10.3	10.0	9.4	9.7
40°	39.4	36.3	31.8	25.5	18.4	13.8	11.3	9.9	9.3	8.8	8.6
42.5°	39.6	37.1	31.4	25.0	17.8	13.5	11.4	9.5	8.4	8.0	7.7
45°	39.5	36.3	31.2	23.9	16.4	12.8	10.6	8.4	7.4	6.7	6.9
47.5°	39.9	36.2	31.0	23.1	16.1	12.8	10.2	7.5	6.5	6.2	6.0
50°	39.4	35.9	29.7	21.9	15.1	12.4	9.2	6.7	5.5	4.9	4.9
52.5°	38.5	35.6	29.8	20.9	14.8	12.0	8.6	5.7	4.6	4.1	4.0
55°	37.7	35.0	28.9	19.7	13.7	11.2	7.9	4.9	3.7	3.1	3.1
57.5°	37.2	34.6	27.6	18.6	13.1	10.7	7.1	4.0	2.8	2.6	2.3
60°	37.0	32.7	27.1	17.6	12.9	10.2	6.3	3.2	2.3	2.0	2.1
62.5°	35.5	32.4	25.5	16.8	12.5	9.6	5.3	2.5	1.6	1.4	1.5
65°	33.6	31.0	24.1	15.9	12.0	8.9	4.6	1.8	1.1	1.1	1.1
67.5°	32.3	29.4	22.3	15.1	11.6	8.1	4.0	1.1	0.6	0.5	0.7
70°	30.3	27.0	21.1	14.1	10.7	7.3	3.1	0.5	0.1	0.1	0.2
72.5°	28.4	25.8	19.3	13.1	10.2	6.7	2.6	0.0	0.0	0.0	0.0
75°	26.8	24.4	18.2	12.3	9.5	5.8	2.0	0.0	0.0	0.0	0.0
76°	27.2	23.8	17.9	11.6	9.3	5.8	1.9	0.0	0.0	0.0	0.0
77.5°	26.0	22.5	16.8	11.1	8.7	5.2	1.5	0.0	0.0	0.0	0.0
80°	25.0	22.3	15.9	10.9	8.4	5.2	1.7	0.0	0.0	0.0	0.0
82.5°	23.9	21.2	14.7	10.3	8.0	5.0	1.6	0.0	0.0	0.0	0.0
85°	23.3	20.2	13.8	10.1	8.0	5.0	1.7	0.0	0.0	0.0	0.0
87.5°	22.3	19.7	13.3	9.7	8.0	4.8	1.6	0.0	0.0	0.0	0.0
90°	21.9	19.5	13.6	9.8	7.5	4.6	1.4	0.0	0.0	0.0	0.0
92.5°	22.0	19.5	13.2	9.9	7.7	4.8	1.6	0.0	0.0	0.0	0.0
95°	22.7	19.2	13.5	9.9	7.9	4.8	1.5	0.0	0.0	0.0	0.0
97.5°	21.7	19.0	13.5	9.8	7.8	4.5	1.3	0.0	0.0	0.0	0.0
100°	22.5	18.9	13.6	9.7	7.7	4.7	1.5	0.0	0.0	0.0	0.0
102.5°	21.9	18.8	13.5	9.7	7.5	4.7	1.4	0.0	0.0	0.0	0.0
105°	21.8	19.6	14.2	9.8	7.8	4.6	1.4	0.0	0.0	0.0	0.0
107.5°	21.8	19.3	14.0	10.1	7.9	4.8	1.3	0.0	0.0	0.0	0.0





TEST NUMBER: G1-1710-337-9

CATALOG NUMBER: B95-VE-BLK-LD4-8W-40-CL-120-EDC1

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
110°	21.6	19.2	14.2	9.9	7.5	4.4	1.1	0.0	0.0	0.0	0.0
112.5°	22.1	19.2	14.4	10.1	7.5	4.5	1.4	0.0	0.0	0.0	0.0
115°	21.7	19.2	14.5	9.9	7.4	4.4	1.3	0.0	0.0	0.0	0.0
117.5°	22.1	19.3	14.3	10.4	7.3	4.4	1.3	0.0	0.0	0.0	0.0
120°	21.3	18.4	14.3	10.2	6.8	4.0	1.0	0.0	0.0	0.0	0.0
122.5°	21.4	18.7	14.7	10.3	6.8	4.1	1.2	0.0	0.0	0.0	0.0
125°	21.2	18.0	13.9	10.3	6.7	3.7	1.0	0.0	0.0	0.0	0.0
127.5°	20.6	17.5	14.3	10.0	6.4	3.5	1.0	0.0	0.0	0.0	0.0
130°	20.2	17.2	13.6	9.9	6.2	3.3	0.7	0.0	0.0	0.0	0.0
132.5°	20.0	16.8	13.4	9.8	6.3	3.2	0.9	0.0	0.0	0.0	0.0
135°	19.5	16.7	12.7	9.7	6.1	3.0	0.7	0.0	0.0	0.0	0.0
137.5°	19.1	15.6	12.1	9.1	5.8	2.9	0.7	0.0	0.0	0.0	0.0
140°	17.8	15.3	11.5	8.7	5.8	2.8	0.7	0.0	0.0	0.0	0.0
142.5°	17.0	14.7	10.7	7.9	5.3	2.6	0.5	0.0	0.0	0.0	0.0
145°	16.3	13.8	9.7	7.1	4.9	2.5	0.4	0.0	0.0	0.0	0.0
147.5°	15.1	13.0	8.8	6.4	4.5	2.3	0.4	0.0	0.0	0.0	0.0
150°	13.8	11.5	8.4	5.8	3.7	1.7	0.1	0.0	0.0	0.0	0.0
152.5°	13.3	11.3	7.9	5.4	3.5	1.7	0.2	0.0	0.0	0.0	0.0
155°	11.9	10.5	7.2	5.0	3.2	1.3	0.1	0.0	0.0	0.0	0.0
157.5°	11.0	9.0	6.6	4.3	2.5	0.8	0.0	0.0	0.0	0.0	0.0
160°	9.5	8.2	6.1	3.8	2.1	0.6	0.0	0.0	0.0	0.0	0.0
162.5°	8.1	7.0	5.1	3.5	1.3	0.4	0.0	0.0	0.0	0.0	0.0
165°	6.8	6.1	4.4	2.9	1.0	0.4	0.0	0.0	0.0	0.0	0.0
167.5°	5.3	4.8	3.0	1.8	1.0	0.3	0.0	0.0	0.0	0.0	0.0
170°	3.6	3.1	1.7	1.1	0.5	0.1	0.0	0.0	0.0	0.0	0.0
172.5°	2.2	2.0	1.0	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)