

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: P580384

Luminaire Tested: **HVSL2-4-LD4-LO-40-UNV-O-EDD**

Issue Date: 12/16/2022



**Test Information**

Test Method: LM-79-08  
Report Number: P580384  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-6)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/16/2022  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: HVSL2-4-LD4-LO-40-UNV-O-EDD  
Description: 4 FOOT, 2INCH WIDE, HVSL LED LUMINAIRE, WITH 4000K, 80 CRI LEDS  
Light Source: -  
Ballast/Driver: -

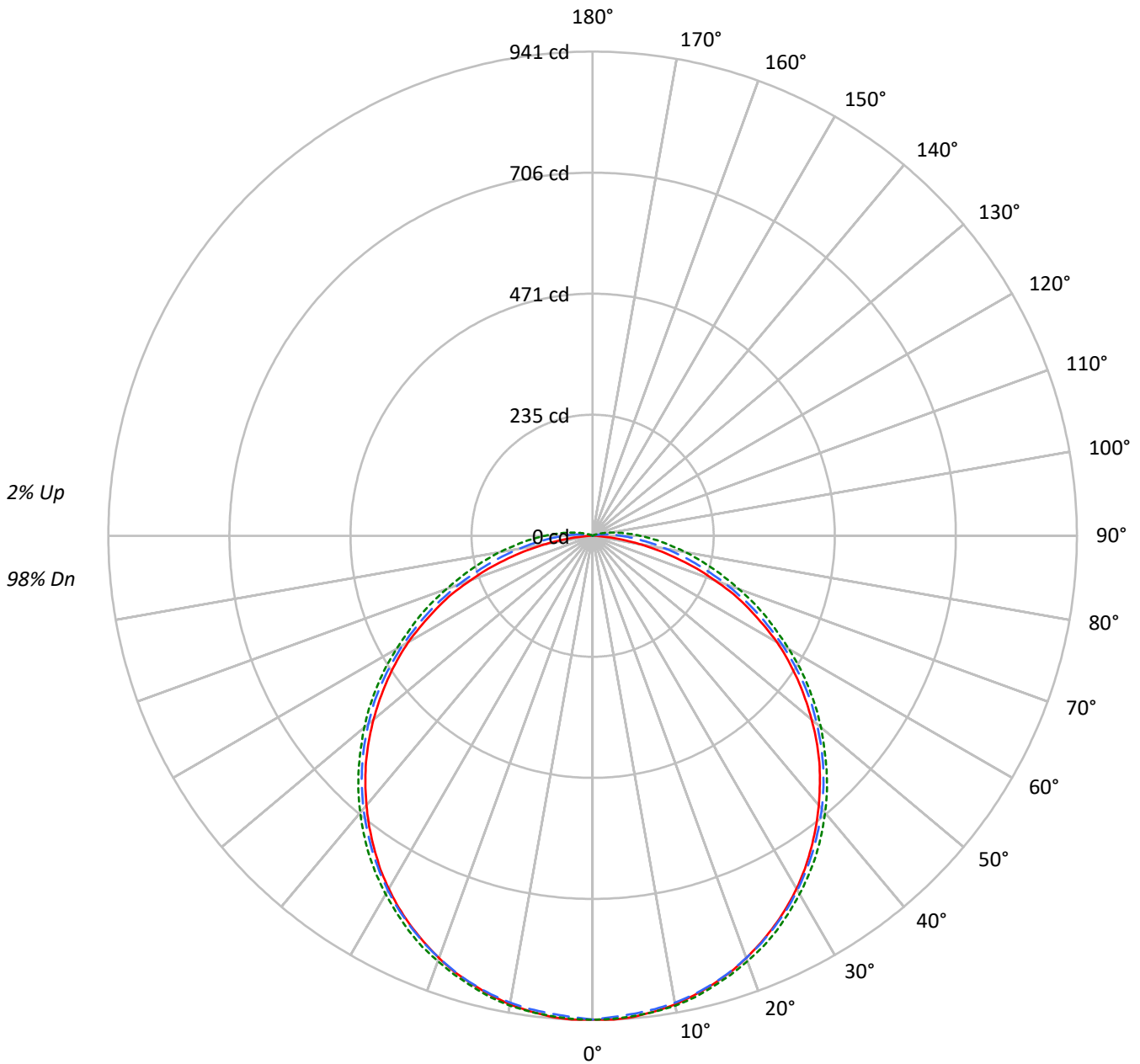
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2843.0 lumens  
Efficiency: N/A  
Efficacy: 123.1 lumens/watt  
Spacing Criteria (0/90/45): 1.25 / 1.27 / 1.38  
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.17')  
CIE Type: Direct  
  
Input Watts (W): 23.1  
Input Voltage (V): NR  
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									
RC	80									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	0																
RCR																																					
0	119	119	119	119	116	116	116	116	110	110	110	105	105	105	101	101	101					98															
1	108	102	98	94	105	100	96	92	95	92	89	91	88	86	87	85	83					81															
2	98	89	82	76	95	87	80	75	83	77	73	79	75	71	76	72	69					67															
3	89	78	69	63	86	76	68	62	73	66	61	70	64	59	67	62	58					56															
4	81	69	60	53	79	67	59	52	65	57	52	62	56	51	60	54	50					47															
5	75	61	52	45	72	60	52	45	58	50	44	56	49	44	54	48	43					41															
6	69	55	46	40	67	54	46	39	52	45	39	50	44	38	49	43	38					36															
7	64	50	41	35	62	49	41	35	47	40	34	46	39	34	44	38	34					32															
8	59	46	37	31	58	45	37	31	43	36	31	42	35	30	41	35	30					28															
9	55	42	34	28	54	41	33	28	40	33	28	39	32	27	38	32	27					25															
10	52	39	31	25	51	38	30	25	37	30	25	36	29	25	35	29	25					23															

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

	0°	45°	90°
0°	15182	15182	15182
5°	15152	14195	13960
10°	15051	13371	12922
15°	14921	12588	11951
20°	14783	11830	11082
25°	14615	11110	10282
30°	14422	10409	9505
35°	14180	9711	8780
40°	13925	9022	8053
45°	13654	8329	7338
50°	13298	7608	6635
55°	12915	6872	5930
60°	12457	6051	5202
65°	11713	5207	4511
70°	10649	4315	3797
75°	9129	3422	3150
80°	6866	2595	2554
85°	3677	1827	1992



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	89.0	3.1
10°-20°	255.2	9.0
20°-30°	387.3	13.6
30°-40°	468.3	16.5
40°-50°	488.6	17.2
50°-60°	446.7	15.7
60°-70°	348.3	12.2
70°-80°	217.9	7.7
80°-90°	99.0	3.5
90°-100°	33.2	1.2
100°-110°	8.3	0.3
110°-120°	1.3	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	731.5	25.7
0°-40°	1199.8	42.2
0°-60°	2135.1	75.1
0°-90°	2800.2	98.5
90°-120°	42.8	1.5
90°-150°	42.8	1.5
90°-180°	43.0	1.5
0°-180°	2843.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	940	940	940	940	940	
5°	938	936	932	937	937	89
15°	903	904	902	907	907	255
25°	836	837	838	845	846	385
35°	740	744	747	754	757	463
45°	623	628	634	640	643	480
55°	486	492	501	508	512	434
65°	334	340	352	366	371	331
75°	169	180	206	230	239	180
85°	29	54	93	123	134	37
90°	0	20	55	82	92	1
95°	0	5	28	51	59	0
105°	0	1	5	14	18	0
115°	1	1	1	2	4	0
125°	0	0	0	0	0	0
135°	0	0	0	0	0	0
145°	0	0	0	0	0	0
155°	0	0	0	0	0	0
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



TEST NUMBER: P580384

CATALOG NUMBER: HVSL2-4-LD4-LO-40-UNV-O-EDD

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	940.3	940.3	940.3	940.3	940.3
2.5°	941.4	940.1	935.9	940.1	939.8
5°	938.3	936.5	932.3	936.7	936.7
7.5°	932.1	931.4	927.7	932.8	932.8
10°	924.8	924.6	921.5	927.0	927.2
12.5°	914.6	915.5	912.6	917.9	918.6
15°	902.6	904.2	901.7	906.8	906.6
17.5°	889.5	890.4	888.6	894.4	894.2
20°	873.4	874.5	873.1	879.1	879.8
22.5°	855.4	856.9	856.7	862.9	864.7
25°	836.3	837.0	837.9	845.0	846.3
27.5°	815.3	816.4	817.9	824.4	825.7
30°	792.2	794.0	795.8	802.4	804.2
32.5°	767.8	769.6	771.8	780.5	781.4
35°	740.4	743.7	746.8	754.3	757.4
37.5°	712.9	717.1	720.0	727.9	730.4
40°	683.8	688.0	692.7	701.1	702.7
42.5°	653.5	658.3	663.9	671.4	674.1
45°	622.9	628.4	633.5	639.7	642.8
47.5°	589.8	595.4	601.6	608.7	610.7
50°	555.7	562.1	568.8	575.4	579.0
52.5°	520.7	528.4	536.0	543.1	546.4
55°	486.1	491.9	501.0	508.3	511.6
57.5°	450.2	455.1	463.3	475.2	477.0
60°	413.6	418.1	426.5	436.2	440.2
62.5°	373.3	379.3	388.1	400.5	404.1
65°	334.0	339.8	351.6	365.5	371.3
67.5°	296.1	298.1	313.2	327.8	337.1
70°	251.4	258.9	276.4	294.4	301.5
72.5°	212.8	220.3	239.6	260.7	269.5
75°	169.1	179.5	205.7	230.3	239.0
77.5°	130.8	142.3	174.7	199.5	209.5
80°	91.3	109.3	144.5	172.5	183.3
82.5°	57.4	79.6	117.3	146.5	156.1
85°	29.3	54.1	92.9	122.8	133.7
87.5°	7.8	35.0	72.3	100.9	111.9
90°	0.2	20.2	54.8	82.2	92.2
92.5°	0.2	11.3	40.8	65.4	75.6
95°	0.2	5.3	28.4	51.4	59.4
97.5°	0.2	2.2	19.5	38.8	46.8
100°	0.2	1.1	12.4	28.2	35.0
102.5°	0.4	0.7	7.8	20.2	25.7
105°	0.4	0.7	4.7	13.7	18.4



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	0.7	0.7	0.9	3.8	5.5
115°	0.7	0.7	0.9	2.4	3.5
117.5°	0.0	0.0	0.0	0.0	0.0
120°	0.0	0.0	0.0	0.0	0.0
122.5°	0.0	0.0	0.0	0.0	0.0
125°	0.0	0.0	0.0	0.0	0.0
127.5°	0.0	0.0	0.0	0.0	0.0
130°	0.0	0.0	0.0	0.0	0.0
132.5°	0.0	0.0	0.0	0.0	0.0
135°	0.0	0.0	0.0	0.0	0.0
137.5°	0.0	0.0	0.0	0.0	0.0
140°	0.0	0.0	0.0	0.0	0.0
142.5°	0.0	0.0	0.0	0.0	0.0
145°	0.0	0.0	0.0	0.0	0.0
147.5°	0.0	0.0	0.0	0.0	0.0
150°	0.0	0.0	0.0	0.0	0.0
152.5°	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0
157.5°	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0



Report Generated By 670246072 / DESKTOP-MV3F9LC







— 0°-180°    - - 45°-225°    - - - - 90°-270°







107.5°	0.4	0.7	2.7	9.3	12.6
110°	0.7	0.7	1.6	5.8	8.4



(END OF REPORT)