

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: P580192

Luminaire Tested: **HVSL12-4-LD4-1LO-40-UNV-O-EDD**

Issue Date: 12/16/2022



**Test Information**

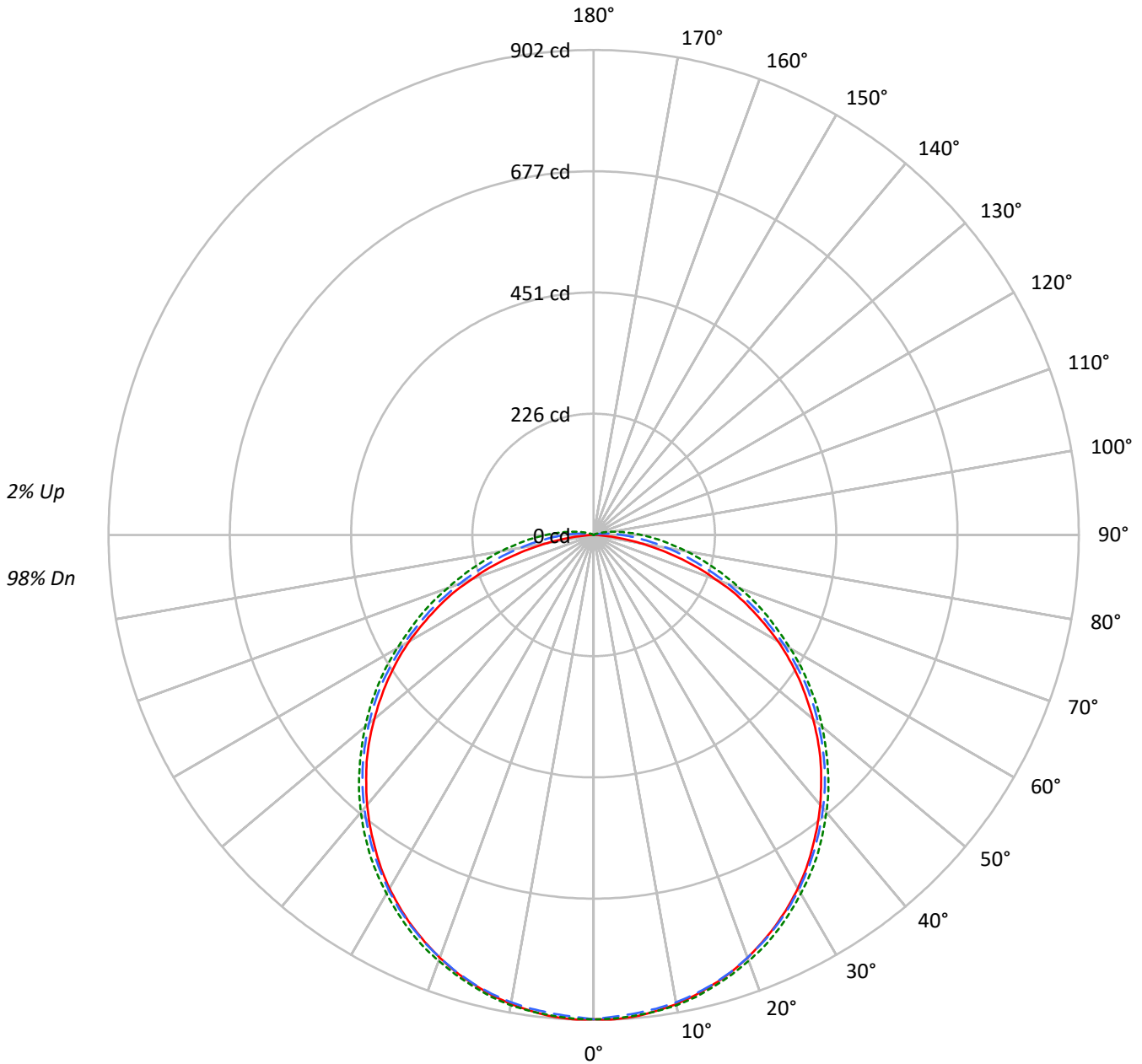
Test Method: LM-79-08  
Report Number: P580192  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-6)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/16/2022  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: HVSL12-4-LD4-1LO-40-UNV-O-EDD  
Description: 4 FOOT, 12INCH WIDE, HVSL LED LUMINAIRE, WITH 4000K, 80 CRI LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2724.0 lumens  
Efficiency: N/A  
Efficacy: 111.6 lumens/watt  
Spacing Criteria (0/90/45): 1.25 / 1.27 / 1.38  
Luminous Opening: Rectangular w/ Sides (W: 1' x L: 4' x H: 0.17')  
CIE Type: Direct  
  
Input Watts (W): 24.4  
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°	2424	2424	2424
5°	2420	2382	2390
10°	2404	2351	2358
15°	2383	2316	2317
20°	2361	2274	2276
25°	2334	2230	2234
30°	2303	2184	2184
35°	2264	2131	2135
40°	2224	2075	2075
45°	2180	2013	2009
50°	2123	1941	1937
55°	2063	1860	1858
60°	1989	1752	1762
65°	1871	1630	1668
70°	1700	1483	1558
75°	1458	1322	1468
80°	1097	1169	1399
85°	586	1024	1361



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	85.3	3.1
10°-20°	244.6	9.0
20°-30°	371.1	13.6
30°-40°	448.7	16.5
40°-50°	468.2	17.2
50°-60°	428.0	15.7
60°-70°	333.7	12.2
70°-80°	208.7	7.7
80°-90°	94.8	3.5
90°-100°	31.8	1.2
100°-110°	8.0	0.3
110°-120°	1.2	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°	700.9	25.7
0°-40°	1149.6	42.2
0°-60°	2045.8	75.1
0°-90°	2683.0	98.5
90°-120°	41.0	1.5
90°-150°	41.0	1.5
90°-180°	41.0	1.5
0°-180°	2724.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	901	901	901	901	901	
5°	899	897	893	898	898	85
15°	865	866	864	869	869	244
25°	801	802	803	810	811	369
35°	709	712	716	723	726	444
45°	597	602	607	613	616	460
55°	466	471	480	487	490	416
65°	320	326	337	350	356	317
75°	162	172	197	221	229	173
85°	28	52	89	118	128	35
90°	0	19	52	79	88	1
95°	0	5	27	49	57	0
105°	0	1	4	13	18	0
115°	1	1	1	2	3	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



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	900.9	900.9	900.9	900.9	900.9
2.5°	902.0	900.7	896.7	900.7	900.5
5°	899.0	897.3	893.3	897.5	897.5
7.5°	893.1	892.4	888.8	893.7	893.7
10°	886.1	885.9	882.9	888.2	888.4
12.5°	876.3	877.1	874.4	879.5	880.1
15°	864.8	866.3	864.0	868.9	868.7
17.5°	852.3	853.1	851.4	857.0	856.8
20°	836.8	837.9	836.6	842.3	843.0
22.5°	819.6	821.1	820.9	826.8	828.5
25°	801.3	802.0	802.8	809.6	810.9
27.5°	781.1	782.2	783.7	789.9	791.1
30°	759.1	760.8	762.5	768.8	770.5
32.5°	735.7	737.4	739.5	747.8	748.7
35°	709.4	712.5	715.5	722.7	725.7
37.5°	683.0	687.1	689.8	697.5	699.8
40°	655.2	659.2	663.7	671.8	673.3
42.5°	626.1	630.8	636.1	643.3	645.9
45°	596.8	602.1	607.0	612.9	615.9
47.5°	565.2	570.5	576.4	583.2	585.1
50°	532.4	538.6	545.0	551.3	554.7
52.5°	498.9	506.3	513.5	520.3	523.5
55°	465.8	471.3	480.0	487.0	490.2
57.5°	431.4	436.0	443.9	455.4	457.1
60°	396.3	400.6	408.6	418.0	421.8
62.5°	357.7	363.4	371.9	383.8	387.2
65°	320.1	325.6	336.8	350.2	355.7
67.5°	283.7	285.7	300.1	314.1	323.0
70°	240.8	248.1	264.8	282.0	288.8
72.5°	203.9	211.1	229.6	249.8	258.3
75°	162.0	172.0	197.1	220.7	229.0
77.5°	125.3	136.4	167.4	191.1	200.7
80°	87.5	104.7	138.5	165.2	175.6
82.5°	55.0	76.2	112.4	140.4	149.5
85°	28.0	51.8	89.0	117.7	128.1
87.5°	7.4	33.6	69.2	96.6	107.3
90°	0.2	19.3	52.5	78.8	88.4
92.5°	0.2	10.8	39.1	62.7	72.4
95°	0.2	5.1	27.2	49.3	56.9
97.5°	0.2	2.1	18.7	37.2	44.8
100°	0.2	1.1	11.9	27.0	33.6
102.5°	0.4	0.6	7.4	19.3	24.6
105°	0.4	0.6	4.5	13.2	17.6



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	0.6	0.6	0.8	3.6	5.3
115°	0.6	0.6	0.8	2.3	3.4
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	0.6	2.5	8.9	12.1
110°	0.6	0.6	1.5	5.5	8.1



(END OF REPORT)