

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: P580191

Luminaire Tested: **HVSL12-4-LD4-1LO-40-UNV-O-EDD-90**

Issue Date: 12/16/2022



**Test Information**

Test Method: LM-79-08  
Report Number: P580191  
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-90  
Description: 4 FOOT, 12INCH WIDE, HVSL LED LUMINAIRE, WITH 4000K, 90 CRI LEDS  
Light Source: -  
Ballast/Driver: -

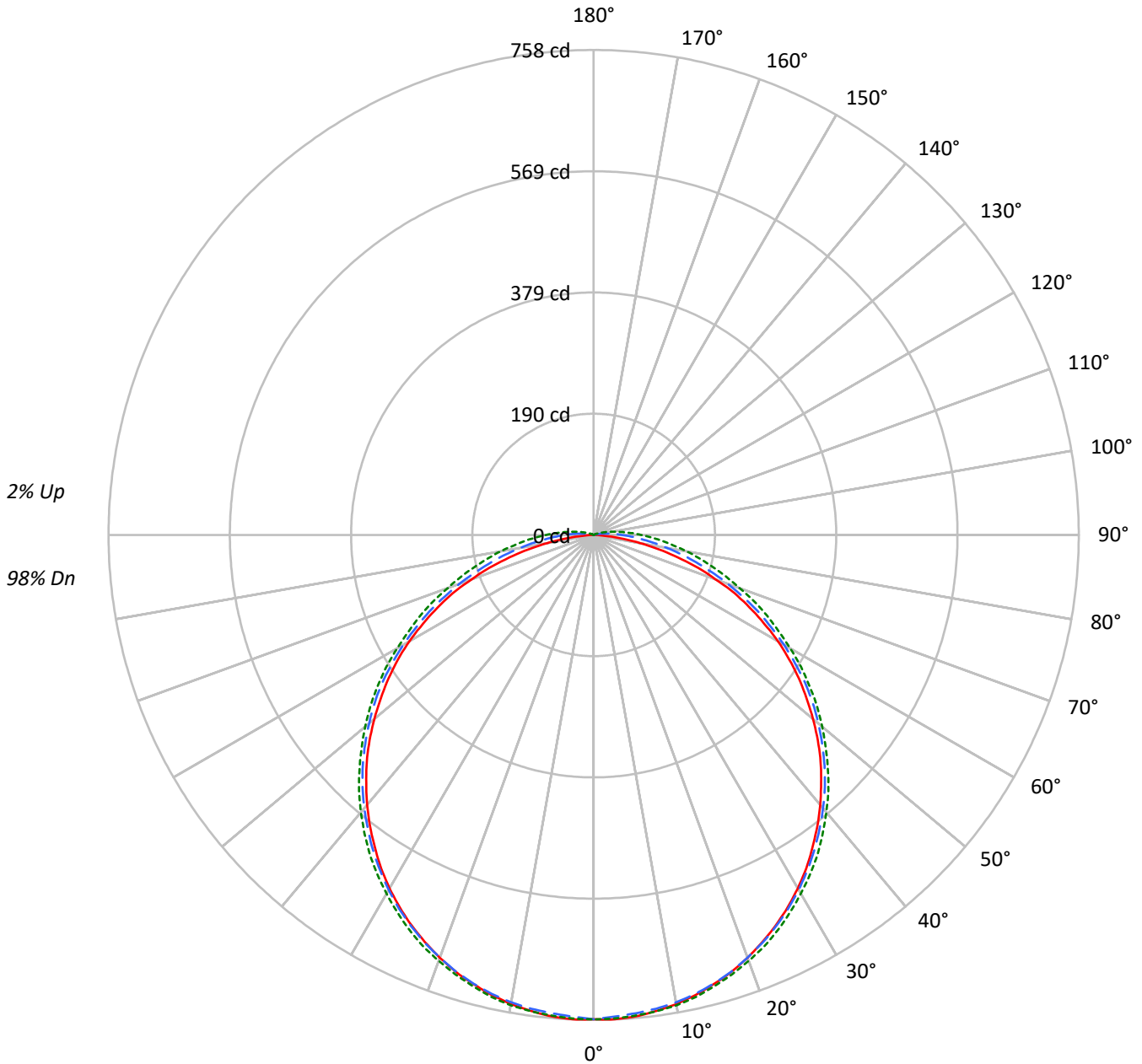
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2289.0 lumens  
Efficiency: N/A  
Efficacy: 93.8 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°	2037	2037	2037
5°	2033	2002	2008
10°	2020	1976	1982
15°	2002	1946	1946
20°	1984	1911	1912
25°	1961	1874	1877
30°	1935	1835	1835
35°	1903	1791	1794
40°	1869	1744	1743
45°	1832	1692	1688
50°	1784	1631	1628
55°	1733	1563	1561
60°	1672	1472	1480
65°	1572	1370	1402
70°	1429	1247	1310
75°	1225	1111	1233
80°	921	983	1176
85°	494	860	1143



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	71.6	3.1
10°-20°	205.5	9.0
20°-30°	311.8	13.6
30°-40°	377.0	16.5
40°-50°	393.4	17.2
50°-60°	359.7	15.7
60°-70°	280.4	12.3
70°-80°	175.4	7.7
80°-90°	79.7	3.5
90°-100°	26.7	1.2
100°-110°	6.7	0.3
110°-120°	1.0	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°	589.0	25.7
0°-40°	966.0	42.2
0°-60°	1719.1	75.1
0°-90°	2254.6	98.5
90°-120°	34.4	1.5
90°-150°	34.4	1.5
90°-180°	34.0	1.5
0°-180°	2289.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	757	757	757	757	757	
5°	756	754	751	754	754	72
15°	727	728	726	730	730	205
25°	673	674	675	680	681	310
35°	596	599	601	607	610	373
45°	502	506	510	515	518	386
55°	391	396	403	409	412	350
65°	269	274	283	294	299	266
75°	136	145	166	185	192	145
85°	24	44	75	99	108	30
90°	0	16	44	66	74	1
95°	0	4	23	41	48	0
105°	0	0	4	11	15	0
115°	0	0	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°	757.1	757.1	757.1	757.1	757.1
2.5°	758.0	756.9	753.5	756.9	756.7
5°	755.5	754.0	750.6	754.2	754.2
7.5°	750.5	749.9	746.9	751.0	751.0
10°	744.6	744.4	741.9	746.4	746.5
12.5°	736.4	737.1	734.8	739.0	739.6
15°	726.7	728.0	726.0	730.1	729.9
17.5°	716.2	716.9	715.5	720.1	719.9
20°	703.2	704.1	703.0	707.8	708.3
22.5°	688.7	690.0	689.8	694.8	696.2
25°	673.4	673.9	674.6	680.3	681.4
27.5°	656.4	657.3	658.5	663.7	664.8
30°	637.8	639.3	640.7	646.1	647.5
32.5°	618.2	619.6	621.4	628.4	629.1
35°	596.1	598.8	601.3	607.3	609.8
37.5°	574.0	577.3	579.7	586.1	588.1
40°	550.6	554.0	557.7	564.5	565.7
42.5°	526.1	530.1	534.5	540.6	542.7
45°	501.5	506.0	510.1	515.1	517.6
47.5°	474.9	479.4	484.4	490.1	491.7
50°	447.4	452.6	457.9	463.3	466.2
52.5°	419.2	425.5	431.5	437.2	439.9
55°	391.4	396.0	403.3	409.2	411.9
57.5°	362.5	366.4	373.0	382.6	384.1
60°	333.0	336.6	343.4	351.2	354.4
62.5°	300.5	305.4	312.5	322.5	325.3
65°	269.0	273.6	283.1	294.3	298.9
67.5°	238.4	240.0	252.2	264.0	271.5
70°	202.4	208.5	222.6	237.0	242.7
72.5°	171.3	177.4	192.9	209.9	217.0
75°	136.2	144.6	165.6	185.4	192.4
77.5°	105.3	114.6	140.6	160.6	168.7
80°	73.5	88.0	116.4	138.8	147.6
82.5°	46.2	64.1	94.4	118.0	125.6
85°	23.6	43.5	74.8	98.9	107.6
87.5°	6.2	28.2	58.2	81.2	90.1
90°	0.2	16.2	44.1	66.2	74.2
92.5°	0.2	9.1	32.8	52.6	60.9
95°	0.2	4.3	22.8	41.4	47.8
97.5°	0.2	1.8	15.7	31.2	37.7
100°	0.2	0.9	10.0	22.7	28.2
102.5°	0.4	0.5	6.2	16.2	20.7
105°	0.4	0.5	3.7	11.1	14.8



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	0.5	0.5	0.7	3.0	4.5
115°	0.5	0.5	0.7	2.0	2.9
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	0.5	2.1	7.5	10.2
110°	0.5	0.5	1.2	4.6	6.8



(END OF REPORT)