

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: P580199

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

Issue Date: 12/16/2022



**Test Information**

Test Method: LM-79-08  
Report Number: P580199  
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-LD4-1STD-40-UNV-O-EDD-90  
Description: 4 FOOT, 12INCH WIDE, HVSL LED LUMINAIRE, WITH 4000K, 90 CRI LEDS  
Light Source: -  
Ballast/Driver: -

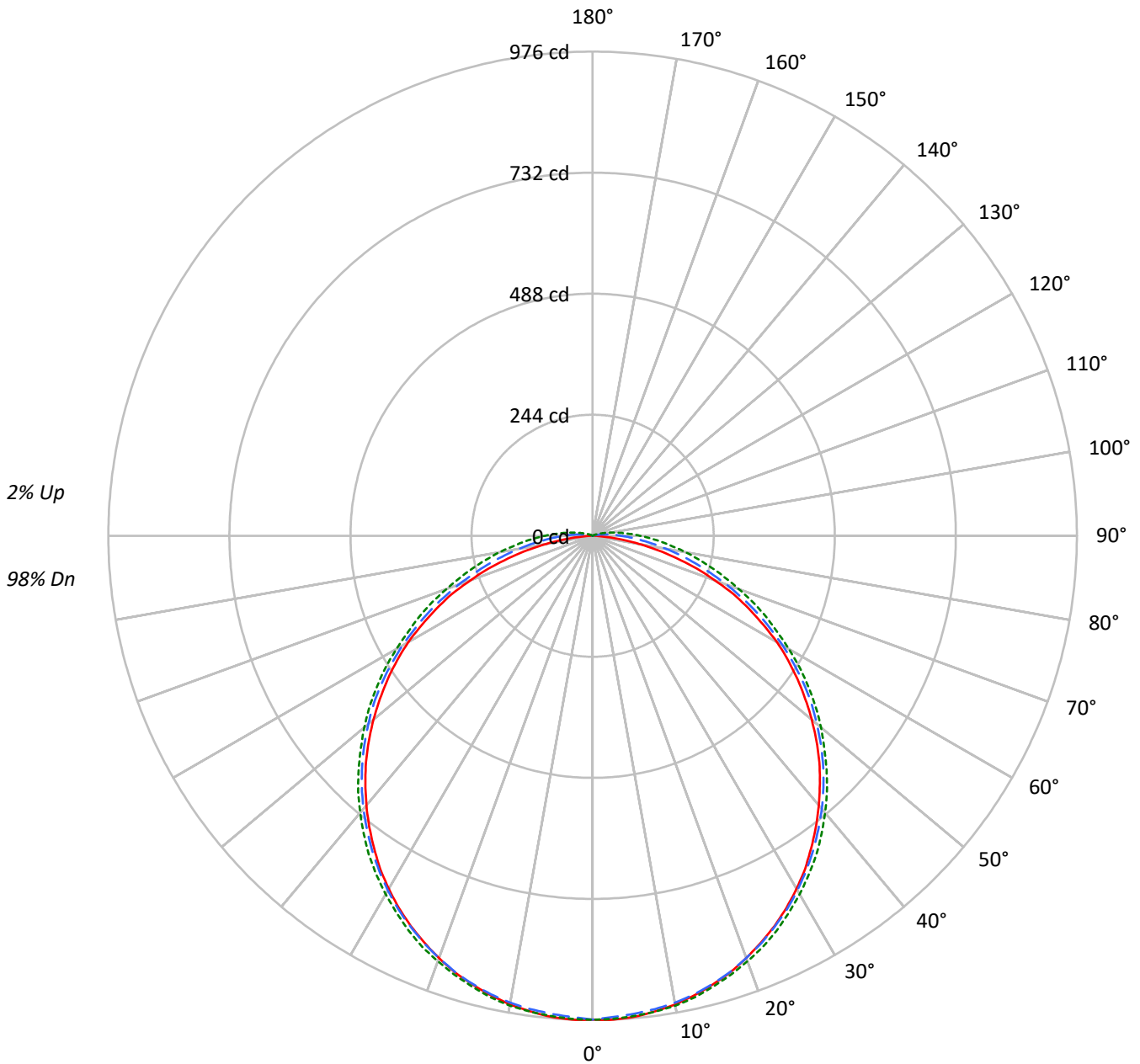
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2949.0 lumens  
Efficiency: N/A  
Efficacy: 85.5 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): 34.5  
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°	2625	2625	2625
5°	2620	2579	2587
10°	2602	2546	2553
15°	2580	2507	2508
20°	2555	2462	2464
25°	2527	2415	2419
30°	2494	2364	2365
35°	2451	2307	2311
40°	2407	2246	2246
45°	2360	2180	2175
50°	2299	2101	2098
55°	2233	2014	2011
60°	2153	1897	1907
65°	2025	1765	1806
70°	1840	1606	1687
75°	1578	1432	1589
80°	1187	1265	1514
85°	636	1108	1473



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	92.3	3.1
10°-20°	264.8	9.0
20°-30°	401.7	13.6
30°-40°	485.7	16.5
40°-50°	506.8	17.2
50°-60°	463.4	15.7
60°-70°	361.2	12.3
70°-80°	226.0	7.7
80°-90°	102.6	3.5
90°-100°	34.4	1.2
100°-110°	8.6	0.3
110°-120°	1.4	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°	758.8	25.7
0°-40°	1244.5	42.2
0°-60°	2214.7	75.1
0°-90°	2904.6	98.5
90°-120°	44.4	1.5
90°-150°	44.4	1.5
90°-180°	44.0	1.5
0°-180°	2949.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	975	975	975	975	975	
5°	973	971	967	972	972	92
15°	936	938	935	941	940	264
25°	868	868	869	876	878	400
35°	768	771	775	782	786	481
45°	646	652	657	664	667	498
55°	504	510	520	527	531	450
65°	346	352	365	379	385	343
75°	175	186	213	239	248	187
85°	30	56	96	127	139	38
90°	0	21	57	85	96	1
95°	0	6	29	53	62	0
105°	0	1	5	14	19	1
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



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	975.4	975.4	975.4	975.4	975.4
2.5°	976.5	975.1	970.8	975.1	974.9
5°	973.3	971.4	967.1	971.7	971.7
7.5°	966.8	966.2	962.2	967.5	967.5
10°	959.3	959.0	955.8	961.6	961.8
12.5°	948.7	949.6	946.6	952.1	952.8
15°	936.3	937.9	935.3	940.6	940.4
17.5°	922.7	923.6	921.8	927.8	927.5
20°	905.9	907.1	905.7	911.9	912.6
22.5°	887.3	888.9	888.7	895.1	896.9
25°	867.5	868.2	869.1	876.5	877.9
27.5°	845.7	846.8	848.4	855.1	856.5
30°	821.8	823.6	825.4	832.3	834.2
32.5°	796.5	798.3	800.6	809.6	810.5
35°	768.0	771.4	774.6	782.4	785.7
37.5°	739.4	743.8	746.8	755.1	757.6
40°	709.3	713.7	718.5	727.3	728.9
42.5°	677.8	682.9	688.6	696.4	699.2
45°	646.1	651.8	657.1	663.6	666.8
47.5°	611.8	617.6	624.0	631.4	633.4
50°	576.4	583.1	590.0	596.9	600.6
52.5°	540.1	548.1	556.0	563.3	566.8
55°	504.2	510.2	519.6	527.2	530.7
57.5°	467.0	472.0	480.5	493.0	494.8
60°	429.0	433.6	442.4	452.5	456.6
62.5°	387.2	393.4	402.6	415.5	419.2
65°	346.5	352.5	364.7	379.1	385.1
67.5°	307.2	309.3	324.9	340.1	349.7
70°	260.7	268.6	286.7	305.3	312.7
72.5°	220.7	228.5	248.6	270.4	279.6
75°	175.4	186.2	213.4	238.9	247.9
77.5°	135.7	147.6	181.2	206.9	217.3
80°	94.7	113.4	149.9	178.9	190.1
82.5°	59.6	82.5	121.6	152.0	161.9
85°	30.4	56.1	96.3	127.4	138.6
87.5°	8.0	36.3	75.0	104.6	116.1
90°	0.2	20.9	56.8	85.3	95.6
92.5°	0.2	11.7	42.3	67.8	78.4
95°	0.2	5.5	29.4	53.3	61.6
97.5°	0.2	2.3	20.2	40.2	48.5
100°	0.2	1.1	12.9	29.2	36.3
102.5°	0.5	0.7	8.0	20.9	26.7
105°	0.5	0.7	4.8	14.3	19.1



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	0.7	0.7	0.9	3.9	5.7
115°	0.7	0.7	0.9	2.5	3.7
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°	0.5	0.7	2.8	9.7	13.1
110°	0.7	0.7	1.6	6.0	8.7



(END OF REPORT)