

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: P580184

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

Issue Date: 12/16/2022



**Test Information**

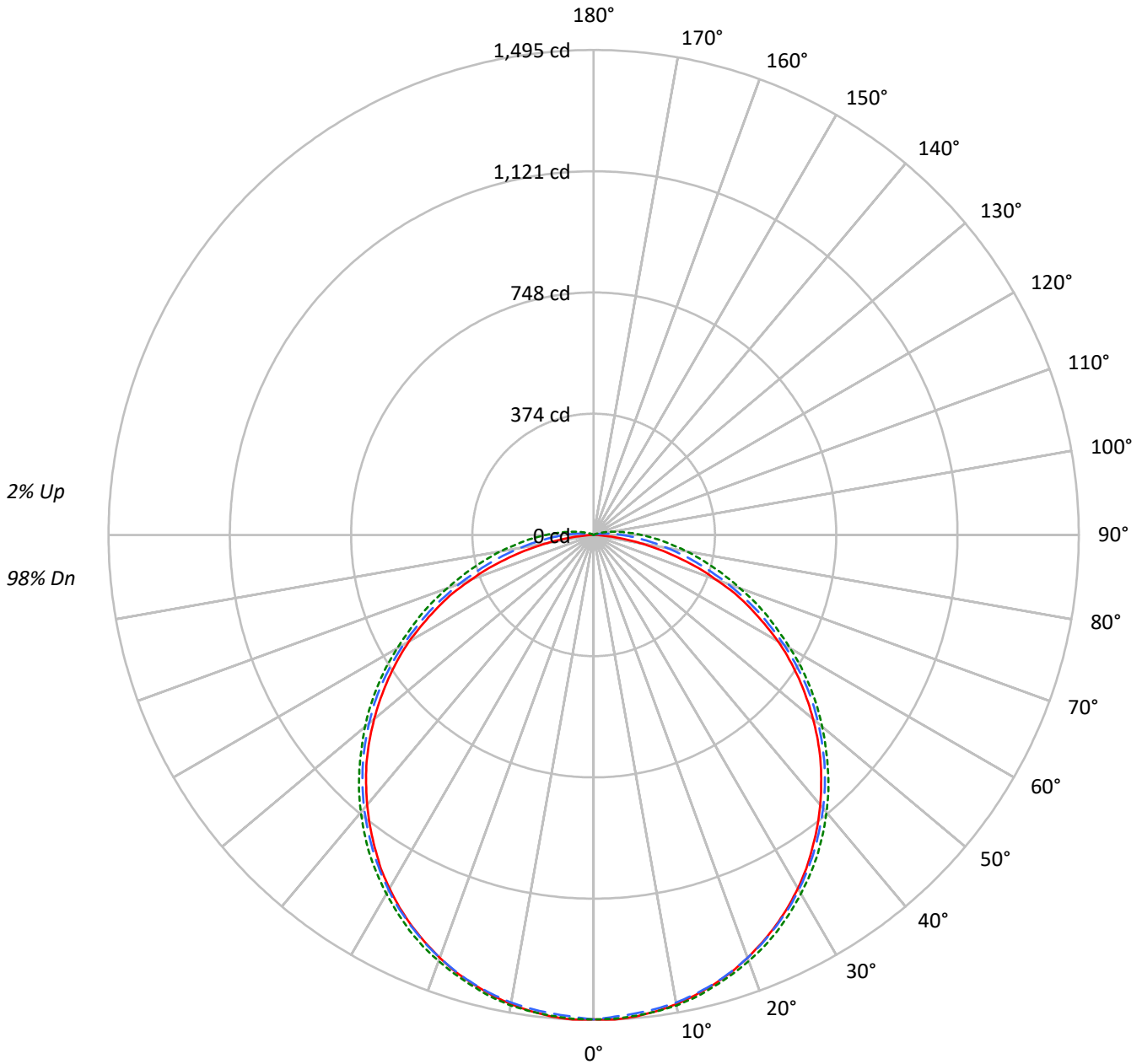
Test Method: LM-79-08  
Report Number: P580184  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-6)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/16/2022  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: HVSL12-4-LD4-1HI-40-UNV-O-EDD  
Description: 4 FOOT, 12INCH WIDE, HVSL LED LUMINAIRE, WITH 4000K, 80 CRI LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4516.0 lumens  
Efficiency: N/A  
Efficacy: 99.3 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): 45.5  
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				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	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°	4019	4019	4019
5°	4012	3949	3962
10°	3985	3898	3909
15°	3950	3839	3840
20°	3913	3769	3773
25°	3869	3698	3704
30°	3818	3620	3621
35°	3754	3532	3539
40°	3687	3440	3440
45°	3615	3338	3331
50°	3521	3217	3212
55°	3419	3084	3080
60°	3298	2904	2920
65°	3101	2702	2766
70°	2819	2459	2584
75°	2418	2192	2433
80°	1819	1938	2320
85°	972	1697	2256



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	141.3	3.1
10°-20°	405.4	9.0
20°-30°	615.2	13.6
30°-40°	743.8	16.5
40°-50°	776.1	17.2
50°-60°	709.6	15.7
60°-70°	553.2	12.2
70°-80°	346.1	7.7
80°-90°	157.2	3.5
90°-100°	52.7	1.2
100°-110°	13.2	0.3
110°-120°	2.1	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°	1161.9	25.7
0°-40°	1905.8	42.2
0°-60°	3391.6	75.1
0°-90°	4448.0	98.5
90°-120°	68.0	1.5
90°-150°	68.0	1.5
90°-180°	68.0	1.5
0°-180°	4516.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1494	1494	1494	1494	1494	
5°	1490	1488	1481	1488	1488	142
15°	1434	1436	1432	1440	1440	405
25°	1328	1330	1331	1342	1344	612
35°	1176	1181	1186	1198	1203	736
45°	989	998	1006	1016	1021	762
55°	772	781	796	807	813	690
65°	531	540	558	581	590	525
75°	269	285	327	366	380	286
85°	46	86	148	195	212	59
90°	0	32	87	131	146	2
95°	0	8	45	82	94	0
105°	1	1	7	22	29	1
115°	1	1	1	4	6	1
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	



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CATALOG NUMBER: HVSL12-4-LD4-1HI-40-UNV-O-EDD

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1493.6	1493.6	1493.6	1493.6	1493.6
2.5°	1495.4	1493.3	1486.6	1493.3	1492.9
5°	1490.5	1487.6	1480.9	1488.0	1488.0
7.5°	1480.6	1479.5	1473.6	1481.6	1481.6
10°	1469.0	1468.6	1463.7	1472.5	1472.8
12.5°	1452.8	1454.2	1449.6	1458.1	1459.1
15°	1433.8	1436.2	1432.4	1440.5	1440.1
17.5°	1413.0	1414.4	1411.6	1420.7	1420.4
20°	1387.3	1389.0	1386.9	1396.4	1397.5
22.5°	1358.8	1361.2	1360.9	1370.7	1373.6
25°	1328.5	1329.5	1330.9	1342.2	1344.3
27.5°	1295.0	1296.8	1299.3	1309.5	1311.6
30°	1258.4	1261.2	1264.0	1274.6	1277.4
32.5°	1219.7	1222.5	1226.0	1239.8	1241.2
35°	1176.0	1181.3	1186.2	1198.2	1203.1
37.5°	1132.4	1139.1	1143.6	1156.3	1160.2
40°	1086.2	1092.9	1100.3	1113.7	1116.2
42.5°	1038.0	1045.7	1054.5	1066.5	1070.7
45°	989.4	998.2	1006.3	1016.2	1021.1
47.5°	936.9	945.7	955.6	966.9	970.0
50°	882.7	892.9	903.5	914.1	919.7
52.5°	827.1	839.4	851.4	862.7	867.9
55°	772.2	781.3	795.8	807.4	812.7
57.5°	715.1	722.9	735.9	754.9	757.7
60°	657.0	664.1	677.4	692.9	699.3
62.5°	592.9	602.4	616.5	636.2	641.9
65°	530.6	539.8	558.4	580.6	589.8
67.5°	470.4	473.6	497.5	520.8	535.5
70°	399.3	411.3	439.1	467.6	478.9
72.5°	338.0	350.0	380.6	414.1	428.2
75°	268.7	285.2	326.8	365.8	379.6
77.5°	207.7	226.0	277.5	316.9	332.7
80°	145.1	173.6	229.6	273.9	291.2
82.5°	91.2	126.4	186.3	232.7	247.9
85°	46.5	85.9	147.5	195.1	212.3
87.5°	12.3	55.6	114.8	160.2	177.8
90°	0.4	32.0	87.0	130.6	146.5
92.5°	0.4	18.0	64.8	103.9	120.1
95°	0.4	8.5	45.1	81.7	94.4
97.5°	0.4	3.5	31.0	61.6	74.3
100°	0.4	1.8	19.7	44.7	55.6
102.5°	0.7	1.1	12.3	32.0	40.8
105°	0.7	1.1	7.4	21.8	29.2



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CATALOG NUMBER: HVSL12-4-LD4-1HI-40-UNV-O-EDD

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	1.1	1.1	1.4	6.0	8.8
115°	1.1	1.1	1.4	3.9	5.6
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°	0.7	1.1	4.2	14.8	20.1
110°	1.1	1.1	2.5	9.2	13.4



(END OF REPORT)