

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: P239272

Luminaire Tested: **HDF-2-LD4-UNV-2-HI-50-OPL-EDC-1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P239272
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1711-412-15)
Test Lab: INNOVATION CENTER(G2)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: HDF-2-LD4-UNV-2-HI-50-OPL-EDC-1
Description: FAILSAFE HDF LED FIXTURE
2FT, 2-ROW LED BOARDS, OPAL LENS
Light Source: (84) 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

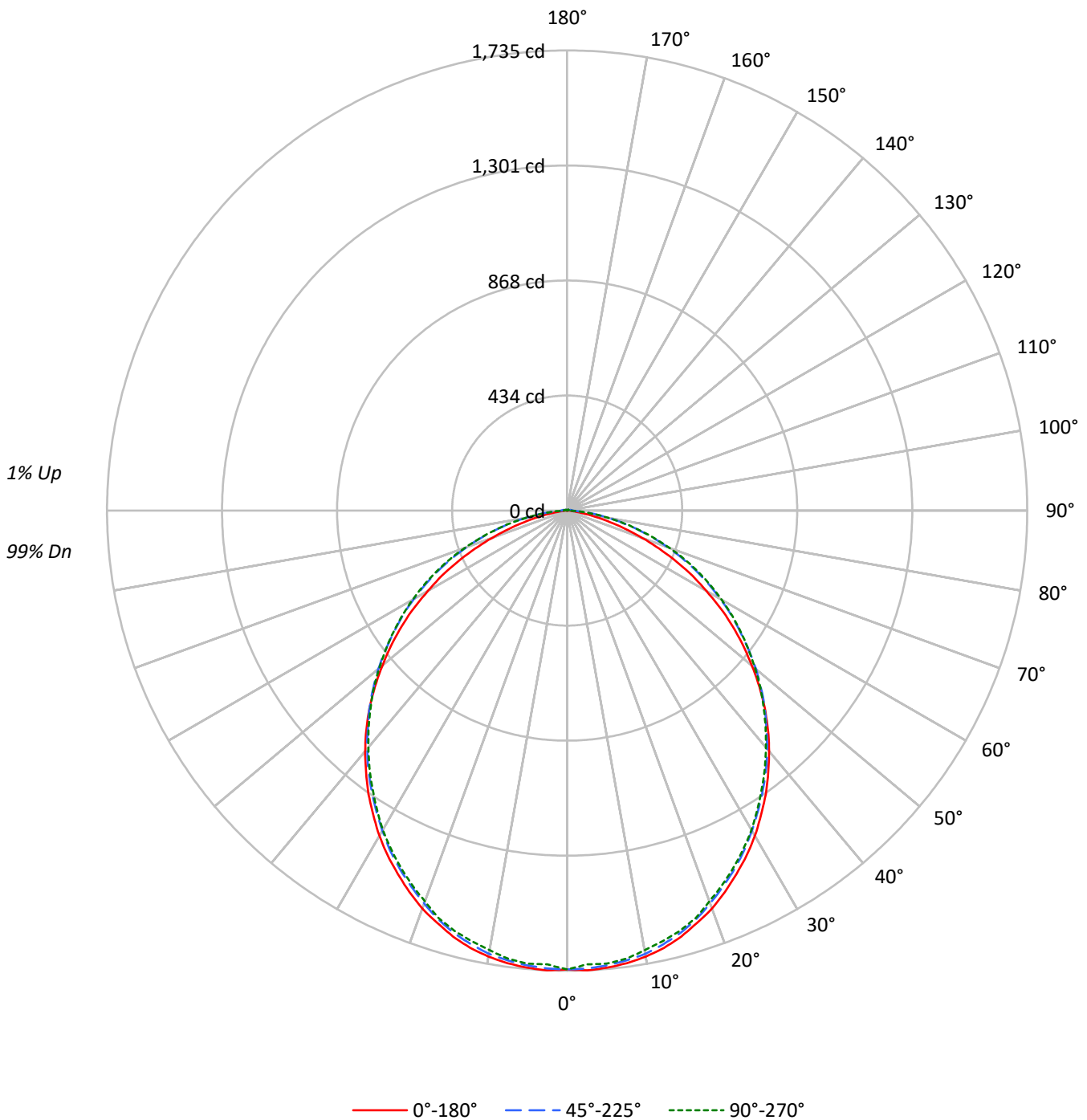
Lumens per Lamp: N/A
Luminaire Lumens: 4519.6 lumens
Efficiency: N/A
Efficacy: 103.0 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.2 / 1.32
Luminous Opening: Rectangular (W 0.58' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 43.9
Input Voltage (V): 120
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

TEST NUMBER: P239272

CATALOG NUMBER: HDF-2-LD4-UNV-2-HI-50-OPL-EDC-1

Luminous Intensity Polar Plot





TEST NUMBER: P239272

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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	101	101	101	99
1	109	104	100	97	106	102	98	95	98	95	92	94	91	89	90	88	86	84
2	99	91	85	79	97	89	83	78	86	81	76	82	78	74	79	76	73	71
3	91	81	73	66	88	79	72	66	76	70	64	73	68	63	70	66	62	60
4	83	72	63	56	81	70	62	56	68	61	55	65	59	54	63	58	53	51
5	77	64	55	49	75	63	55	48	61	53	48	59	52	47	57	51	47	45
6	71	58	49	43	69	57	48	42	55	48	42	53	47	42	52	46	41	39
7	66	52	44	38	64	52	43	38	50	43	37	49	42	37	47	41	37	35
8	61	48	40	34	60	47	39	34	46	39	33	45	38	33	43	37	33	31
9	57	44	36	30	56	43	36	30	42	35	30	41	35	30	40	34	30	28
10	54	41	33	28	52	40	33	28	39	32	27	38	32	27	37	31	27	25

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	15961	15961	15961
5°	16022	15943	15879
10°	15998	15900	15771
15°	15882	15750	15668
20°	15682	15479	15394
25°	15381	15189	15118
30°	15086	14847	14811
35°	14706	14492	14415
40°	14271	14126	14043
45°	13751	13751	13661
50°	13047	13344	13270
55°	12264	12818	12873
60°	11171	12317	12413
65°	9903	11710	11861
70°	8141	10842	11028
75°	5964	9839	9960
80°	3480	8342	8342
85°	1821	6754	6203



TEST NUMBER: P239272

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	163.5	3.6
10°-20°	464.8	10.3
20°-30°	688.2	15.2
30°-40°	806.2	17.8
40°-50°	811.0	17.9
50°-60°	706.2	15.6
60°-70°	512.6	11.3
70°-80°	269.7	6.0
80°-90°	67.6	1.5
90°-100°	13.2	0.3
100°-110°	7.6	0.2
110°-120°	4.4	0.1
120°-130°	3.0	0.1
130°-140°	1.7	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°	1316.5	29.1
0°-40°	2122.7	47.0
0°-60°	3639.8	80.5
0°-90°	4489.7	99.3
90°-120°	25.2	0.6
90°-150°	29.8	0.7
90°-180°	30.0	0.7
0°-180°	4519.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1730	1730	1730	1730	1730	
5°	1730	1726	1721	1714	1714	164
15°	1663	1658	1649	1644	1640	468
25°	1511	1501	1492	1487	1485	696
35°	1306	1294	1287	1283	1280	816
45°	1054	1049	1054	1052	1047	811
55°	762	774	797	806	800	680
65°	454	492	536	547	543	449
75°	167	231	276	283	279	182
85°	17	50	64	64	59	24
90°	0	16	19	16	12	1
95°	0	10	17	16	12	0
105°	2	3	9	10	9	1
115°	2	3	5	5	5	2
125°	2	3	3	5	5	2
135°	3	3	3	3	3	1
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: P239272

CATALOG NUMBER: HDF-2-LD4-UNV-2-HI-50-OPL-EDC-1

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1730.0	1730.0	1730.0	1730.0	1730.0
2.5°	1735.2	1735.2	1728.3	1717.9	1712.7
5°	1730.0	1726.5	1721.4	1714.5	1714.5
7.5°	1721.4	1717.9	1711.0	1704.1	1704.1
10°	1707.6	1704.1	1697.2	1686.9	1683.4
12.5°	1688.6	1685.1	1674.8	1666.2	1662.7
15°	1662.7	1657.5	1648.9	1643.7	1640.3
17.5°	1629.9	1626.5	1616.1	1611.0	1611.0
20°	1597.2	1588.5	1576.5	1571.3	1567.9
22.5°	1555.8	1547.2	1535.1	1528.2	1528.2
25°	1510.9	1500.6	1492.0	1486.8	1485.1
27.5°	1466.1	1452.3	1445.4	1440.2	1438.5
30°	1416.1	1402.3	1393.6	1390.2	1390.2
32.5°	1360.9	1348.8	1340.2	1336.7	1335.0
35°	1305.7	1293.6	1286.7	1283.3	1279.8
37.5°	1245.3	1235.0	1231.5	1229.8	1224.6
40°	1184.9	1174.6	1172.9	1171.1	1166.0
42.5°	1121.1	1114.2	1112.5	1114.2	1107.3
45°	1053.9	1048.7	1053.9	1052.1	1047.0
47.5°	983.1	983.1	991.8	993.5	988.3
50°	909.0	915.9	929.7	933.1	924.5
52.5°	836.5	845.2	862.4	869.3	862.4
55°	762.4	774.4	796.9	805.5	800.3
57.5°	686.5	703.7	734.8	743.4	738.2
60°	605.4	631.3	667.5	679.6	672.7
62.5°	533.0	562.3	602.0	612.3	608.9
65°	453.6	491.6	536.4	546.8	543.3
67.5°	376.0	420.9	469.1	481.2	477.8
70°	301.8	353.6	401.9	414.0	408.8
72.5°	231.1	289.8	338.1	348.4	343.2
75°	167.3	231.1	276.0	282.9	279.4
77.5°	110.4	175.9	213.9	222.5	217.3
80°	65.5	125.9	157.0	162.1	157.0
82.5°	34.5	84.5	106.9	108.7	103.5
85°	17.2	50.0	63.8	63.8	58.6
87.5°	6.9	25.9	31.0	29.3	25.9
90°	0.0	15.5	19.0	15.5	12.1
92.5°	0.0	13.8	17.2	15.5	10.3
95°	0.0	10.3	17.2	15.5	12.1
97.5°	0.0	8.6	15.5	15.5	12.1
100°	0.0	5.2	13.8	13.8	12.1
102.5°	0.0	5.2	10.3	12.1	10.3
105°	1.7	3.4	8.6	10.3	8.6
107.5°	1.7	3.4	6.9	8.6	8.6
110°	1.7	3.4	6.9	6.9	6.9



TEST NUMBER: P239272

CATALOG NUMBER: HDF-2-LD4-UNV-2-HI-50-OPL-EDC-1

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	1.7	3.4	5.2	6.9	5.2
115°	1.7	3.4	5.2	5.2	5.2
117.5°	1.7	1.7	5.2	5.2	5.2
120°	1.7	3.4	3.4	5.2	5.2
122.5°	1.7	1.7	3.4	5.2	3.4
125°	1.7	3.4	3.4	5.2	5.2
127.5°	1.7	1.7	3.4	3.4	3.4
130°	3.4	3.4	3.4	3.4	3.4
132.5°	1.7	3.4	3.4	3.4	3.4
135°	3.4	3.4	3.4	3.4	3.4
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

(END OF REPORT)