

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: P239250

Luminaire Tested: **HDF-2-LD4-UNV-2-STD-35-EDC-1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P239250
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1711-412-13)
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-STD-35-EDC-1
Description: FAILSAFE HDF LED FIXTURE
2FT, 2-ROW LED BOARDS, NON-OVERLAY
Light Source: (84) 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

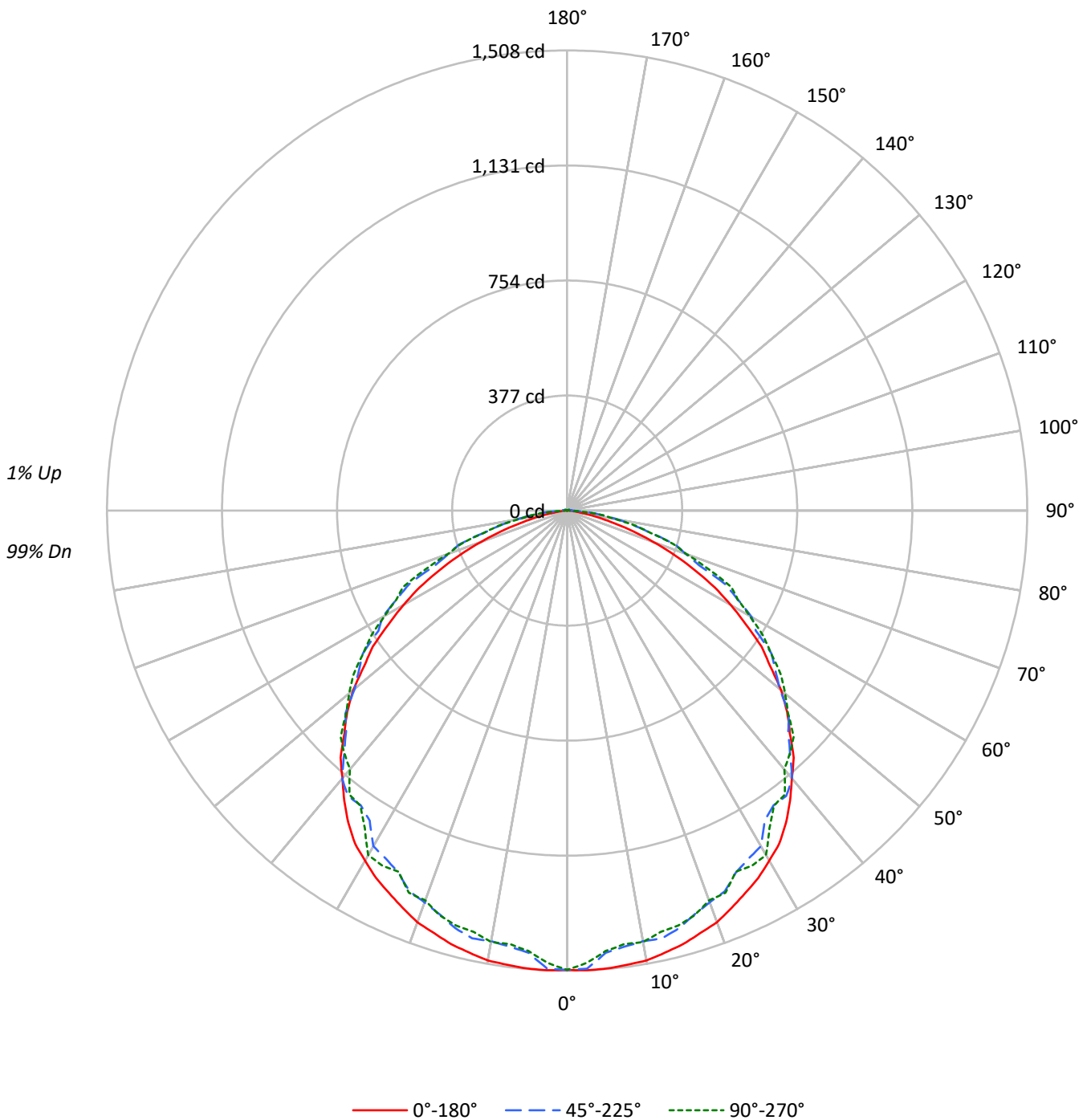
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4308.0 lumens
Efficiency: N/A
Efficacy: 129.8 lumens/watt
Spacing Criteria (0/90/45): 1.31 / 1.26 / 1.39
Luminous Opening: Rectangular (W 0.58' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 33.2
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: P239250
CATALOG NUMBER: HDF-2-LD4-UNV-2-STD-35-EDC-1

Luminous Intensity Polar Plot





TEST NUMBER: P239250

CATALOG NUMBER: HDF-2-LD4-UNV-2-STD-35-EDC-1

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	102	102	102	99
1	109	104	100	96	106	102	98	94	97	94	91	93	91	88	90	87	86	83
2	99	91	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	69
3	90	79	71	65	87	78	70	64	75	68	63	72	66	62	69	65	61	58
4	82	70	61	55	80	69	61	54	66	59	54	64	58	53	62	56	52	50
5	76	63	54	47	74	62	53	47	59	52	46	57	51	46	55	50	45	43
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	37
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33
8	60	47	38	32	59	46	38	32	44	37	32	43	36	32	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	29	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13886	13886	13886
5°	13951	13469	13420
10°	14026	13425	13449
15°	14045	13534	13445
20°	14095	13414	13348
25°	14071	13324	13296
30°	14114	13530	13886
35°	14079	13281	13297
40°	13800	13817	13334
45°	13469	13365	13696
50°	13131	13034	13380
55°	12502	13147	13126
60°	11435	12889	12740
65°	10058	12479	12974
70°	8141	11095	11168
75°	5664	10092	10092
80°	3193	9011	8517
85°	1556	8056	6500



TEST NUMBER: P239250

CATALOG NUMBER: HDF-2-LD4-UNV-2-STD-35-EDC-1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	139.7	3.2
10°-20°	400.1	9.3
20°-30°	612.9	14.2
30°-40°	752.4	17.5
40°-50°	788.7	18.3
50°-60°	711.4	16.5
60°-70°	526.7	12.2
70°-80°	279.4	6.5
80°-90°	72.8	1.7
90°-100°	10.6	0.2
100°-110°	6.1	0.1
110°-120°	3.8	0.1
120°-130°	2.3	0.1
130°-140°	1.1	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°	1152.7	26.8
0°-40°	1905.1	44.2
0°-60°	3405.2	79.0
0°-90°	4284.1	99.4
90°-120°	20.5	0.5
90°-150°	23.9	0.6
90°-180°	24.0	0.6
0°-180°	4308.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1505	1505	1505	1505	1505	
5°	1506	1501	1454	1436	1449	143
15°	1470	1413	1417	1400	1408	415
25°	1382	1336	1309	1306	1306	638
35°	1250	1178	1179	1209	1181	780
45°	1032	1003	1024	1031	1050	799
55°	777	781	817	832	816	688
65°	461	485	572	552	594	456
75°	159	236	283	303	283	176
85°	15	57	76	75	61	22
90°	0	17	17	13	8	1
95°	0	11	13	11	7	0
105°	0	4	8	8	5	1
115°	1	3	5	5	4	1
125°	1	1	3	4	3	1
135°	1	1	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: P239250

CATALOG NUMBER: HDF-2-LD4-UNV-2-STD-35-EDC-1

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1505.1	1505.1	1505.1	1505.1	1505.1
2.5°	1507.8	1505.1	1502.4	1491.7	1483.7
5°	1506.4	1501.1	1454.3	1435.6	1449.0
7.5°	1501.1	1479.7	1441.0	1434.3	1433.0
10°	1497.1	1445.0	1433.0	1442.3	1435.6
12.5°	1483.7	1423.6	1435.6	1425.0	1414.3
15°	1470.4	1412.9	1416.9	1399.6	1407.6
17.5°	1451.7	1391.6	1387.6	1402.2	1390.2
20°	1435.6	1366.2	1366.2	1358.2	1359.5
22.5°	1408.9	1358.2	1350.2	1355.5	1355.5
25°	1382.2	1335.5	1308.8	1306.1	1306.1
27.5°	1356.8	1294.1	1286.1	1272.7	1311.4
30°	1324.8	1252.7	1270.0	1288.7	1303.4
32.5°	1294.1	1212.6	1204.6	1275.4	1234.0
35°	1250.0	1177.9	1179.2	1208.6	1180.6
37.5°	1199.3	1147.2	1179.2	1152.5	1172.5
40°	1145.8	1091.1	1147.2	1128.5	1107.1
42.5°	1099.1	1032.3	1081.7	1067.0	1080.4
45°	1032.3	1002.9	1024.3	1031.0	1049.7
47.5°	977.6	941.5	985.6	1005.6	981.6
50°	914.8	861.4	908.1	926.8	932.2
52.5°	838.7	813.3	860.0	889.4	882.7
55°	777.2	781.3	817.3	832.0	816.0
57.5°	694.4	719.8	733.2	747.9	759.9
60°	619.7	627.7	698.5	690.4	690.4
62.5°	544.9	567.6	629.0	637.0	630.3
65°	460.7	484.8	571.6	551.6	594.3
67.5°	380.6	414.0	467.4	523.5	502.1
70°	301.8	356.6	411.3	434.0	414.0
72.5°	227.0	291.1	372.6	359.2	365.9
75°	158.9	236.4	283.1	303.2	283.1
77.5°	102.8	174.9	223.0	239.0	229.7
80°	60.1	132.2	169.6	176.3	160.3
82.5°	32.1	89.5	117.5	118.9	117.5
85°	14.7	57.4	76.1	74.8	61.4
87.5°	6.7	34.7	32.1	24.0	17.4
90°	0.0	17.4	17.4	13.4	8.0
92.5°	0.0	13.4	14.7	12.0	6.7
95°	0.0	10.7	13.4	10.7	6.7
97.5°	0.0	8.0	12.0	9.3	6.7
100°	0.0	6.7	10.7	9.3	5.3
102.5°	0.0	5.3	9.3	8.0	5.3
105°	0.0	4.0	8.0	8.0	5.3
107.5°	1.3	2.7	8.0	6.7	5.3
110°	1.3	2.7	6.7	6.7	4.0



TEST NUMBER: P239250

CATALOG NUMBER: HDF-2-LD4-UNV-2-STD-35-EDC-1

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	1.3	2.7	5.3	5.3	4.0
115°	1.3	2.7	5.3	5.3	4.0
117.5°	1.3	1.3	4.0	5.3	4.0
120°	1.3	1.3	4.0	4.0	4.0
122.5°	1.3	1.3	2.7	4.0	4.0
125°	1.3	1.3	2.7	4.0	2.7
127.5°	1.3	1.3	2.7	4.0	2.7
130°	1.3	1.3	2.7	2.7	2.7
132.5°	1.3	1.3	2.7	2.7	2.7
135°	1.3	1.3	2.7	2.7	2.7
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)