

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: P239308

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

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P239308
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1711-412-20)
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-1-HI-50-OPL-EDC-1
Description: FAILSAFE HDF LED FIXTURE
2FT, 1-ROW LED BOARDS, OPAL LENS
Light Source: (42) 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

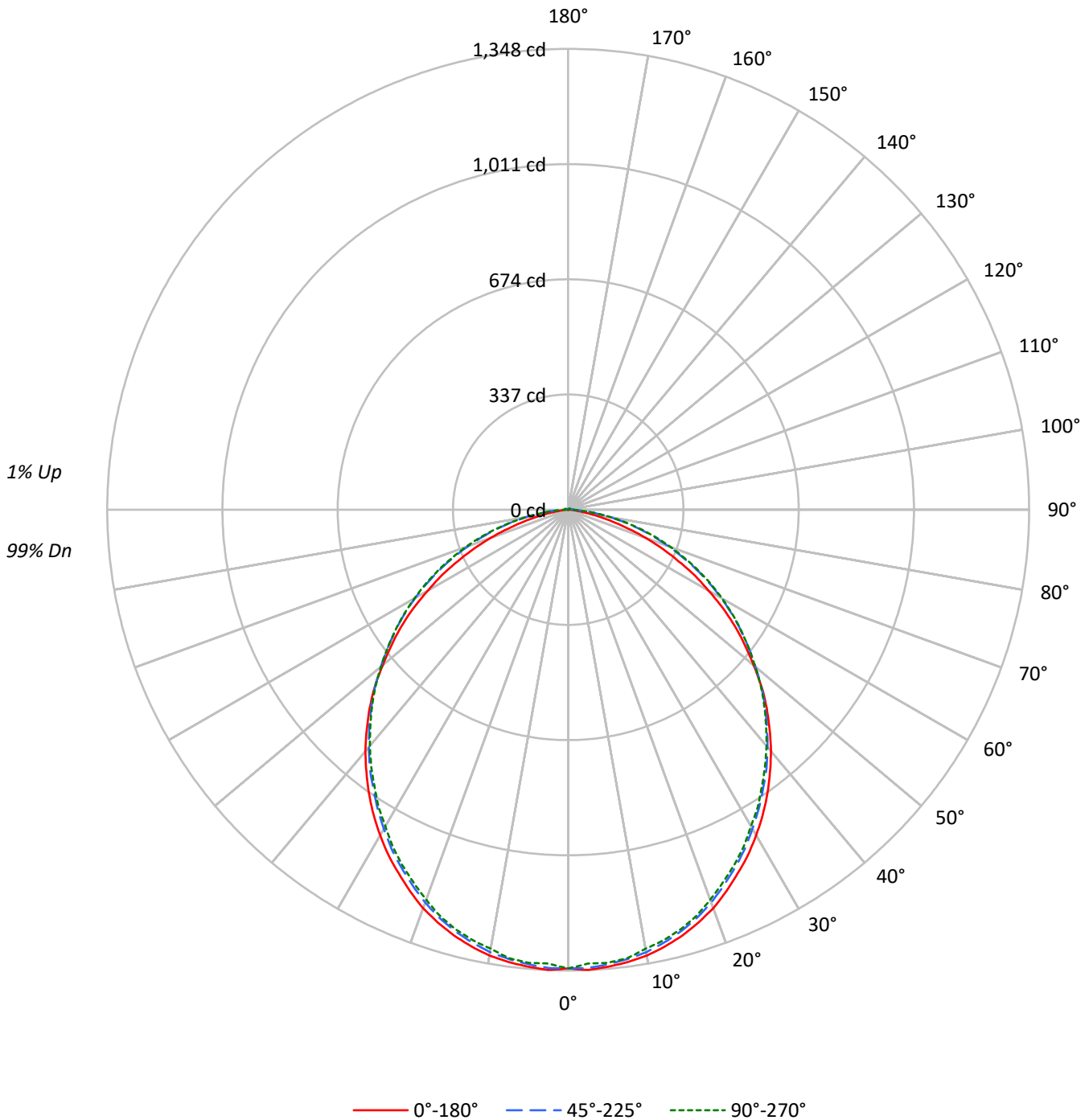
Lumens per Lamp: N/A
Luminaire Lumens: 3498.4 lumens
Efficiency: N/A
Efficacy: 73.3 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.19 / 1.31
Luminous Opening: Rectangular (W 0.58' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 47.7
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: P239308

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

Luminous Intensity Polar Plot





TEST NUMBER: P239308

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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	70
3	91	80	73	66	88	79	71	66	76	69	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°	12380	12380	12380
5°	12427	12360	12320
10°	12408	12312	12218
15°	12318	12193	12137
20°	12178	12007	11921
25°	11946	11755	11681
30°	11715	11482	11390
35°	11437	11192	11127
40°	11112	10919	10867
45°	10712	10618	10580
50°	10161	10264	10244
55°	9590	9917	9941
60°	8752	9529	9582
65°	7759	9025	9152
70°	6496	8373	8570
75°	4759	7600	7807
80°	2773	6551	6705
85°	1387	5526	5219



TEST NUMBER: P239308

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	126.8	3.6
10°-20°	360.0	10.3
20°-30°	532.8	15.2
30°-40°	623.8	17.8
40°-50°	626.9	17.9
50°-60°	545.1	15.6
60°-70°	395.7	11.3
70°-80°	209.7	6.0
80°-90°	54.3	1.6
90°-100°	10.1	0.3
100°-110°	6.2	0.2
110°-120°	3.4	0.1
120°-130°	2.4	0.1
130°-140°	1.2	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°	1019.6	29.1
0°-40°	1643.4	47.0
0°-60°	2815.5	80.5
0°-90°	3475.2	99.3
90°-120°	19.7	0.6
90°-150°	23.2	0.7
90°-180°	23.0	0.7
0°-180°	3498.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1342	1342	1342	1342	1342	
5°	1342	1340	1335	1329	1330	128
15°	1290	1284	1276	1272	1271	364
25°	1174	1165	1155	1149	1147	541
35°	1015	1002	994	989	988	635
45°	821	811	814	812	811	632
55°	596	596	616	621	618	531
65°	355	376	413	422	419	353
75°	134	176	213	222	219	145
85°	13	41	52	52	49	19
90°	0	13	14	13	9	1
95°	0	9	13	12	9	0
105°	0	3	7	9	7	1
115°	2	2	4	4	4	1
125°	2	2	3	3	4	1
135°	2	2	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: P239308

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

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1341.8	1341.8	1341.8	1341.8	1341.8
2.5°	1347.6	1346.2	1341.8	1333.1	1328.8
5°	1341.8	1340.4	1334.6	1328.8	1330.2
7.5°	1334.6	1331.7	1325.9	1321.5	1323.0
10°	1324.4	1320.0	1314.2	1307.0	1304.1
12.5°	1308.4	1305.5	1296.8	1289.6	1289.6
15°	1289.6	1283.8	1276.5	1272.2	1270.7
17.5°	1266.4	1259.1	1251.9	1246.1	1246.1
20°	1240.3	1231.6	1222.9	1215.6	1214.2
22.5°	1208.4	1199.6	1189.5	1182.2	1180.8
25°	1173.5	1164.8	1154.7	1148.9	1147.4
27.5°	1138.7	1127.1	1118.4	1111.2	1111.2
30°	1099.6	1088.0	1077.8	1072.0	1069.1
32.5°	1058.9	1045.9	1037.2	1031.4	1031.4
35°	1015.4	1002.4	993.7	989.3	987.9
37.5°	969.0	957.4	953.0	948.7	945.8
40°	922.6	911.0	906.6	903.7	902.3
42.5°	871.8	861.7	860.2	857.3	855.9
45°	821.0	810.9	813.8	812.3	810.9
47.5°	767.4	760.1	765.9	765.9	764.5
50°	707.9	705.0	715.1	718.0	713.7
52.5°	651.3	649.9	665.8	668.7	665.8
55°	596.2	596.2	616.5	620.9	618.0
57.5°	536.7	541.1	567.2	573.0	570.1
60°	474.3	486.0	516.4	522.2	519.3
62.5°	417.8	430.8	465.6	474.3	470.0
65°	355.4	375.7	413.4	422.1	419.2
67.5°	297.4	322.0	361.2	371.4	367.0
70°	240.8	269.8	310.4	319.1	317.7
72.5°	184.2	221.9	261.1	269.8	268.4
75°	133.5	175.5	213.2	221.9	219.0
77.5°	88.5	134.9	168.3	174.1	171.2
80°	52.2	98.6	123.3	127.7	126.2
82.5°	27.6	66.7	84.1	87.0	84.1
85°	13.1	40.6	52.2	52.2	49.3
87.5°	5.8	21.8	26.1	24.7	21.8
90°	0.0	13.1	14.5	13.1	8.7
92.5°	0.0	10.2	13.1	11.6	8.7
95°	0.0	8.7	13.1	11.6	8.7
97.5°	0.0	5.8	11.6	11.6	8.7
100°	0.0	4.4	10.2	11.6	8.7
102.5°	0.0	4.4	8.7	10.2	8.7
105°	0.0	2.9	7.3	8.7	7.3
107.5°	1.5	2.9	5.8	7.3	5.8
110°	1.5	2.9	4.4	5.8	5.8



TEST NUMBER: P239308

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

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	1.5	1.5	4.4	5.8	4.4
115°	1.5	1.5	4.4	4.4	4.4
117.5°	1.5	1.5	2.9	4.4	4.4
120°	1.5	1.5	2.9	4.4	4.4
122.5°	1.5	1.5	2.9	4.4	4.4
125°	1.5	1.5	2.9	2.9	4.4
127.5°	1.5	1.5	2.9	2.9	2.9
130°	1.5	1.5	2.9	2.9	2.9
132.5°	1.5	1.5	2.9	2.9	2.9
135°	1.5	1.5	2.9	2.9	2.9
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)