

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: P239313

Luminaire Tested: **HDF-2-LD4-UNV-1-LO-30-OPL-EDC-1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P239313
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-LO-30-OPL-EDC-1
Description: FAILSAFE HDF LED FIXTURE
2FT, 1-ROW LED BOARDS, OPAL LENS
Light Source: (42) 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

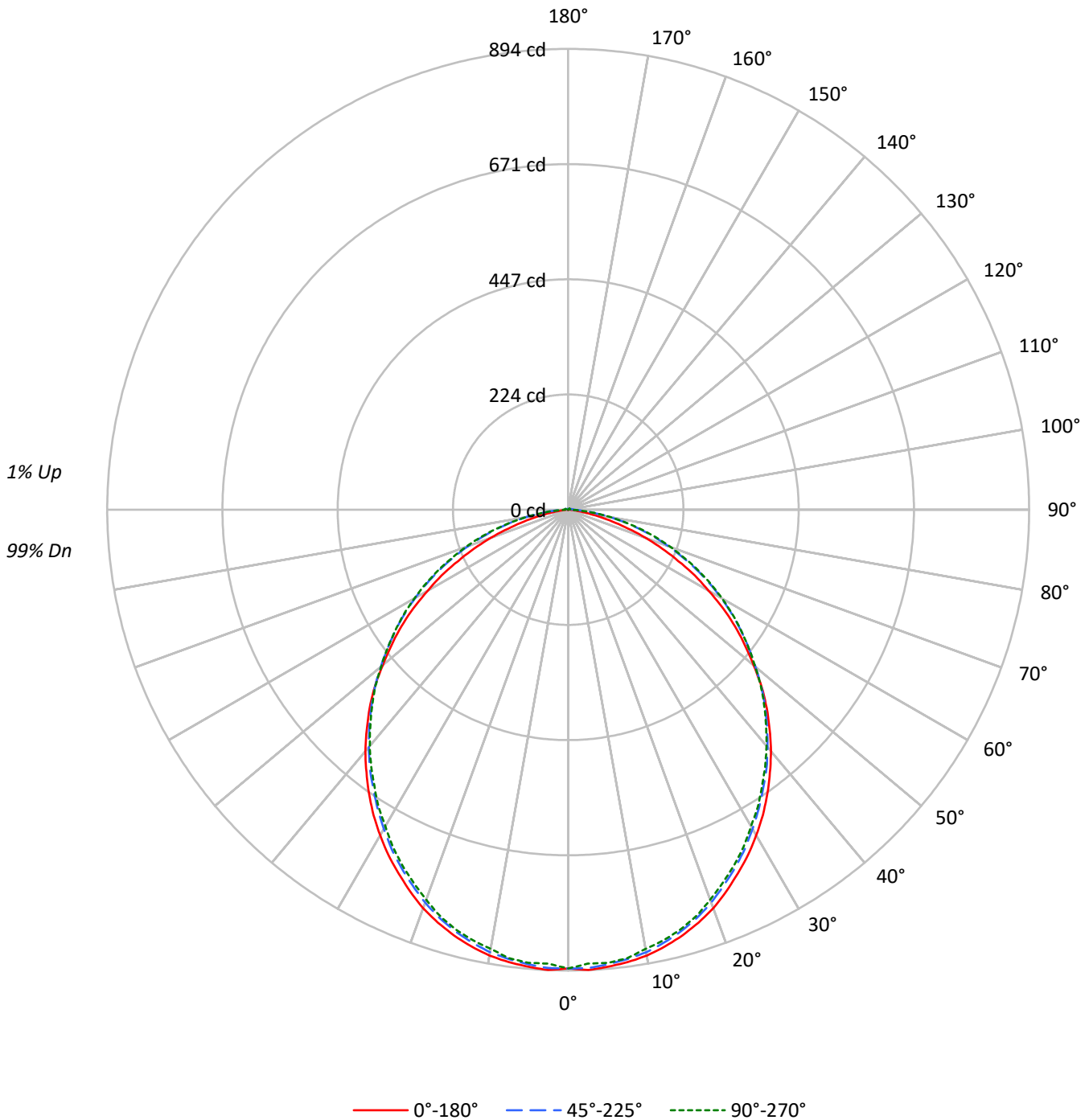
Lumens per Lamp: N/A
Luminaire Lumens: 2320.3 lumens
Efficiency: N/A
Efficacy: 93.9 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.19 / 1.31
Luminous Opening: Rectangular (W 0.58' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 24.7
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: P239313

CATALOG NUMBER: HDF-2-LD4-UNV-1-LO-30-OPL-EDC-1

Luminous Intensity Polar Plot





TEST NUMBER: P239313

CATALOG NUMBER: HDF-2-LD4-UNV-1-LO-30-OPL-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	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°	8211	8211	8211
5°	8243	8198	8171
10°	8229	8167	8104
15°	8171	8087	8050
20°	8077	7964	7907
25°	7924	7797	7748
30°	7770	7616	7554
35°	7586	7424	7380
40°	7370	7242	7208
45°	7106	7043	7017
50°	6739	6808	6795
55°	6360	6577	6593
60°	5805	6320	6357
65°	5146	5986	6071
70°	4308	5554	5684
75°	3155	5041	5180
80°	1838	4346	4447
85°	921	3663	3462



TEST NUMBER: P239313

CATALOG NUMBER: HDF-2-LD4-UNV-1-LO-30-OPL-EDC-1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	84.1	3.6
10°-20°	238.8	10.3
20°-30°	353.4	15.2
30°-40°	413.7	17.8
40°-50°	415.8	17.9
50°-60°	361.6	15.6
60°-70°	262.5	11.3
70°-80°	139.1	6.0
80°-90°	36.0	1.6
90°-100°	6.7	0.3
100°-110°	4.1	0.2
110°-120°	2.2	0.1
120°-130°	1.6	0.1
130°-140°	0.8	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°	676.3	29.1
0°-40°	1090.0	47.0
0°-60°	1867.5	80.5
0°-90°	2305.0	99.3
90°-120°	13.0	0.6
90°-150°	15.3	0.7
90°-180°	15.0	0.6
0°-180°	2320.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	890	890	890	890	890	
5°	890	889	885	881	882	85
15°	855	852	847	844	843	241
25°	778	773	766	762	761	359
35°	674	665	659	656	655	421
45°	545	538	540	539	538	419
55°	395	395	409	412	410	352
65°	236	249	274	280	278	234
75°	88	116	141	147	145	96
85°	9	27	35	35	33	13
90°	0	9	10	9	6	1
95°	0	6	9	8	6	0
105°	0	2	5	6	5	1
115°	1	1	3	3	3	1
125°	1	1	2	2	3	1
135°	1	1	2	2	2	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



TEST NUMBER: P239313

CATALOG NUMBER: HDF-2-LD4-UNV-1-LO-30-OPL-EDC-1

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	890.0	890.0	890.0	890.0	890.0
2.5°	893.8	892.9	890.0	884.2	881.3
5°	890.0	889.0	885.2	881.3	882.3
7.5°	885.2	883.3	879.4	876.5	877.5
10°	878.4	875.6	871.7	866.9	865.0
12.5°	867.9	865.9	860.2	855.4	855.4
15°	855.4	851.5	846.7	843.8	842.8
17.5°	840.0	835.2	830.3	826.5	826.5
20°	822.6	816.9	811.1	806.3	805.3
22.5°	801.5	795.7	789.0	784.2	783.2
25°	778.4	772.6	765.9	762.0	761.1
27.5°	755.3	747.6	741.8	737.0	737.0
30°	729.3	721.6	714.9	711.0	709.1
32.5°	702.4	693.7	687.9	684.1	684.1
35°	673.5	664.8	659.1	656.2	655.2
37.5°	642.7	635.0	632.1	629.2	627.3
40°	611.9	604.2	601.3	599.4	598.5
42.5°	578.3	571.5	570.6	568.6	567.7
45°	544.6	537.8	539.8	538.8	537.8
47.5°	509.0	504.2	508.0	508.0	507.1
50°	469.5	467.6	474.3	476.3	473.4
52.5°	432.0	431.0	441.6	443.6	441.6
55°	395.4	395.4	408.9	411.8	409.9
57.5°	356.0	358.9	376.2	380.1	378.1
60°	314.6	322.3	342.5	346.4	344.5
62.5°	277.1	285.8	308.9	314.6	311.7
65°	235.7	249.2	274.2	280.0	278.1
67.5°	197.2	213.6	239.6	246.3	243.4
70°	159.7	179.0	205.9	211.7	210.7
72.5°	122.2	147.2	173.2	179.0	178.0
75°	88.5	116.4	141.4	147.2	145.3
77.5°	58.7	89.5	111.6	115.5	113.5
80°	34.6	65.4	81.8	84.7	83.7
82.5°	18.3	44.3	55.8	57.7	55.8
85°	8.7	26.9	34.6	34.6	32.7
87.5°	3.8	14.4	17.3	16.4	14.4
90°	0.0	8.7	9.6	8.7	5.8
92.5°	0.0	6.7	8.7	7.7	5.8
95°	0.0	5.8	8.7	7.7	5.8
97.5°	0.0	3.8	7.7	7.7	5.8
100°	0.0	2.9	6.7	7.7	5.8
102.5°	0.0	2.9	5.8	6.7	5.8
105°	0.0	1.9	4.8	5.8	4.8
107.5°	1.0	1.9	3.8	4.8	3.8
110°	1.0	1.9	2.9	3.8	3.8



TEST NUMBER: P239313

CATALOG NUMBER: HDF-2-LD4-UNV-1-LO-30-OPL-EDC-1

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	1.0	1.0	2.9	3.8	2.9
115°	1.0	1.0	2.9	2.9	2.9
117.5°	1.0	1.0	1.9	2.9	2.9
120°	1.0	1.0	1.9	2.9	2.9
122.5°	1.0	1.0	1.9	2.9	2.9
125°	1.0	1.0	1.9	1.9	2.9
127.5°	1.0	1.0	1.9	1.9	1.9
130°	1.0	1.0	1.9	1.9	1.9
132.5°	1.0	1.0	1.9	1.9	1.9
135°	1.0	1.0	1.9	1.9	1.9
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)