

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: P239244

Luminaire Tested: **HDF-4-LD4-UNV-1-LO-50-OPL-EDC-1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P239244
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1711-412-10)
Test Lab: INNOVATION CENTER(G2)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: HDF-4-LD4-UNV-1-LO-50-OPL-EDC-1
Description: FAILSAFE HDF LED FIXTURE
4FT, 1-ROW LED BOARDS, OPAL LENS
Light Source: (84) 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

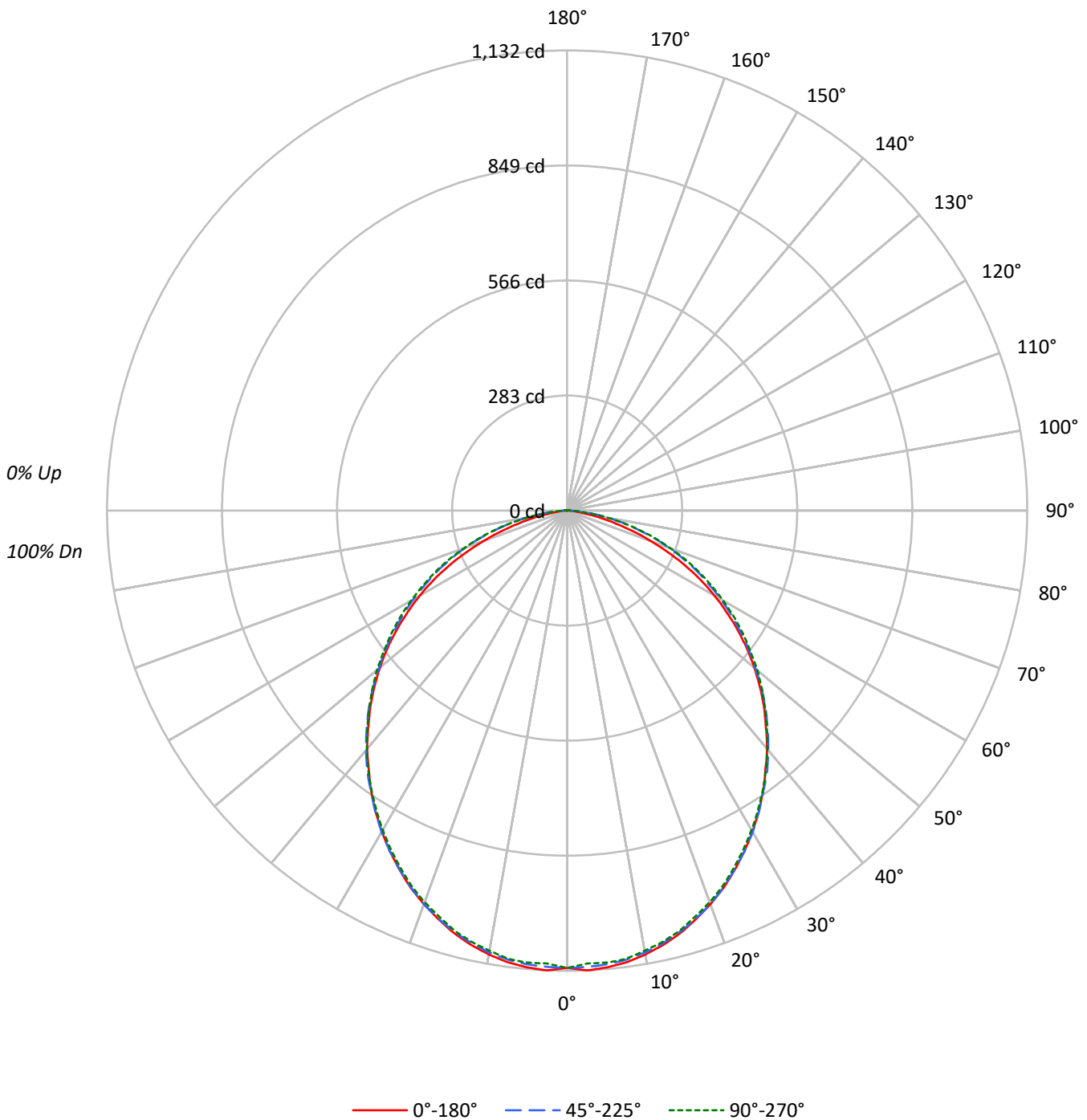
Lumens per Lamp: N/A
Luminaire Lumens: 2949.0 lumens
Efficiency: N/A
Efficacy: 125.0 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.2 / 1.32
Luminous Opening: Rectangular (W 0.58' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 23.6
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: P239244

CATALOG NUMBER: HDF-4-LD4-UNV-1-LO-50-OPL-EDC-1

Luminous Intensity Polar Plot





TEST NUMBER: P239244

CATALOG NUMBER: HDF-4-LD4-UNV-1-LO-50-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	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	100					100			
1	109	104	100	97	106	102	98	95	98	95	92	94	91	89	90	88	86	84					84			
2	99	91	85	79	97	89	83	78	86	81	76	82	78	74	79	76	73	71					71			
3	91	80	72	66	88	79	71	65	76	69	64	73	68	63	70	66	62	60					60			
4	83	71	63	56	81	70	62	56	67	60	55	65	59	54	63	58	53	51					51			
5	77	64	55	49	74	63	54	48	61	53	48	59	52	47	57	51	47	44					44			
6	71	58	49	42	69	57	48	42	55	47	42	53	46	41	51	46	41	39					39			
7	66	52	44	38	64	51	43	37	50	43	37	48	42	37	47	41	37	35					35			
8	61	48	39	34	60	47	39	33	46	38	33	44	38	33	43	37	33	31					31			
9	57	44	36	30	56	43	36	30	42	35	30	41	35	30	40	34	30	28					28			
10	54	41	33	28	52	40	33	27	39	32	27	38	32	27	37	31	27	25					25			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5189	5189	5189
5°	5223	5189	5169
10°	5194	5170	5149
15°	5139	5124	5109
20°	5058	5058	5032
25°	4964	4959	4937
30°	4856	4862	4834
35°	4734	4740	4728
40°	4609	4635	4616
45°	4468	4502	4496
50°	4314	4344	4382
55°	4118	4186	4246
60°	3863	4030	4088
65°	3506	3842	3911
70°	2959	3589	3632
75°	2249	3212	3288
80°	1408	2731	2675
85°	672	2022	1853



TEST NUMBER: P239244

CATALOG NUMBER: HDF-4-LD4-UNV-1-LO-50-OPL-EDC-1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	106.2	3.6
10°-20°	301.4	10.2
20°-30°	447.1	15.2
30°-40°	524.4	17.8
40°-50°	528.8	17.9
50°-60°	463.9	15.7
60°-70°	340.5	11.5
70°-80°	180.4	6.1
80°-90°	43.3	1.5
90°-100°	6.3	0.2
100°-110°	3.2	0.1
110°-120°	1.7	0.1
120°-130°	1.1	0.0
130°-140°	0.5	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°	854.8	29.0
0°-40°	1379.2	46.8
0°-60°	2371.9	80.4
0°-90°	2936.1	99.6
90°-120°	11.2	0.4
90°-150°	12.9	0.4
90°-180°	13.0	0.4
0°-180°	2949.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1125	1125	1125	1125	1125	
5°	1128	1115	1121	1116	1116	107
15°	1076	1064	1073	1069	1070	303
25°	975	968	974	967	970	449
35°	841	834	842	836	840	526
45°	685	680	690	687	689	528
55°	512	509	520	526	528	457
65°	321	330	352	358	358	317
75°	126	158	180	184	184	137
85°	13	35	38	37	35	19
90°	0	10	10	8	8	1
95°	0	5	7	7	6	0
105°	0	2	3	4	4	0
115°	1	1	2	2	2	1
125°	1	1	1	1	1	1
135°	1	1	1	1	1	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: P239244

CATALOG NUMBER: HDF-4-LD4-UNV-1-LO-50-OPL-EDC-1

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1124.8	1124.8	1124.8	1124.8	1124.8
2.5°	1132.2	1119.5	1123.7	1120.6	1115.3
5°	1128.0	1115.3	1120.6	1116.3	1116.3
7.5°	1120.6	1108.9	1114.2	1109.9	1112.1
10°	1108.9	1097.2	1103.6	1099.3	1099.3
12.5°	1094.0	1082.4	1089.8	1084.5	1086.6
15°	1076.0	1064.4	1072.8	1068.6	1069.7
17.5°	1053.8	1044.2	1052.7	1047.4	1047.4
20°	1030.4	1022.0	1030.4	1023.0	1025.1
22.5°	1005.0	997.6	1003.9	995.5	999.7
25°	975.3	967.9	974.3	966.8	970.0
27.5°	944.6	937.1	944.6	938.2	939.3
30°	911.7	905.3	912.8	905.3	907.5
32.5°	877.8	870.4	877.8	872.5	873.5
35°	840.7	834.3	841.7	836.4	839.6
37.5°	801.5	797.2	807.8	800.4	803.6
40°	765.4	758.0	769.6	762.2	766.5
42.5°	724.1	718.8	730.4	725.1	727.2
45°	684.8	679.5	690.1	687.0	689.1
47.5°	643.5	638.2	648.8	646.7	649.9
50°	601.1	596.8	605.3	607.5	610.6
52.5°	557.6	553.4	564.0	567.2	568.2
55°	512.0	508.9	520.5	525.8	527.9
57.5°	465.4	465.4	479.2	484.5	486.6
60°	418.7	419.8	436.8	442.1	443.1
62.5°	371.0	376.3	393.3	400.7	400.7
65°	321.2	329.7	352.0	358.3	358.3
67.5°	269.3	283.1	308.5	313.8	314.9
70°	219.4	237.5	266.1	270.3	269.3
72.5°	170.7	197.2	222.6	227.9	226.9
75°	126.2	158.0	180.2	184.5	184.5
77.5°	86.9	119.8	141.0	143.1	142.1
80°	53.0	88.0	102.8	102.8	100.7
82.5°	28.6	59.4	67.8	65.7	63.6
85°	12.7	35.0	38.2	37.1	35.0
87.5°	4.2	17.0	18.0	17.0	17.0
90°	0.0	9.5	9.5	8.5	8.5
92.5°	0.0	6.4	8.5	7.4	6.4
95°	0.0	5.3	7.4	7.4	6.4
97.5°	0.0	3.2	6.4	6.4	6.4
100°	0.0	3.2	5.3	6.4	5.3
102.5°	0.0	2.1	4.2	5.3	5.3
105°	0.0	2.1	3.2	4.2	4.2
107.5°	0.0	1.1	3.2	3.2	3.2
110°	0.0	1.1	2.1	3.2	3.2



TEST NUMBER: P239244

CATALOG NUMBER: HDF-4-LD4-UNV-1-LO-50-OPL-EDC-1

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	1.1	1.1	2.1	2.1	2.1
115°	1.1	1.1	2.1	2.1	2.1
117.5°	1.1	1.1	2.1	2.1	2.1
120°	1.1	1.1	1.1	2.1	2.1
122.5°	1.1	1.1	1.1	2.1	2.1
125°	1.1	1.1	1.1	1.1	1.1
127.5°	1.1	1.1	1.1	1.1	1.1
130°	1.1	1.1	1.1	1.1	1.1
132.5°	1.1	1.1	1.1	1.1	1.1
135°	1.1	1.1	1.1	1.1	1.1
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)