

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: P239268

Luminaire Tested: **HDF-2-LD4-UNV-2-LO-50-IK12-EDC-1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P239268
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1711-412-14)
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-LO-50-IK12-EDC-1
Description: FAILSAFE HDF LED FIXTURE
2FT, 2-ROW LED BOARDS, CLEAR LENS
Light Source: (84) 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

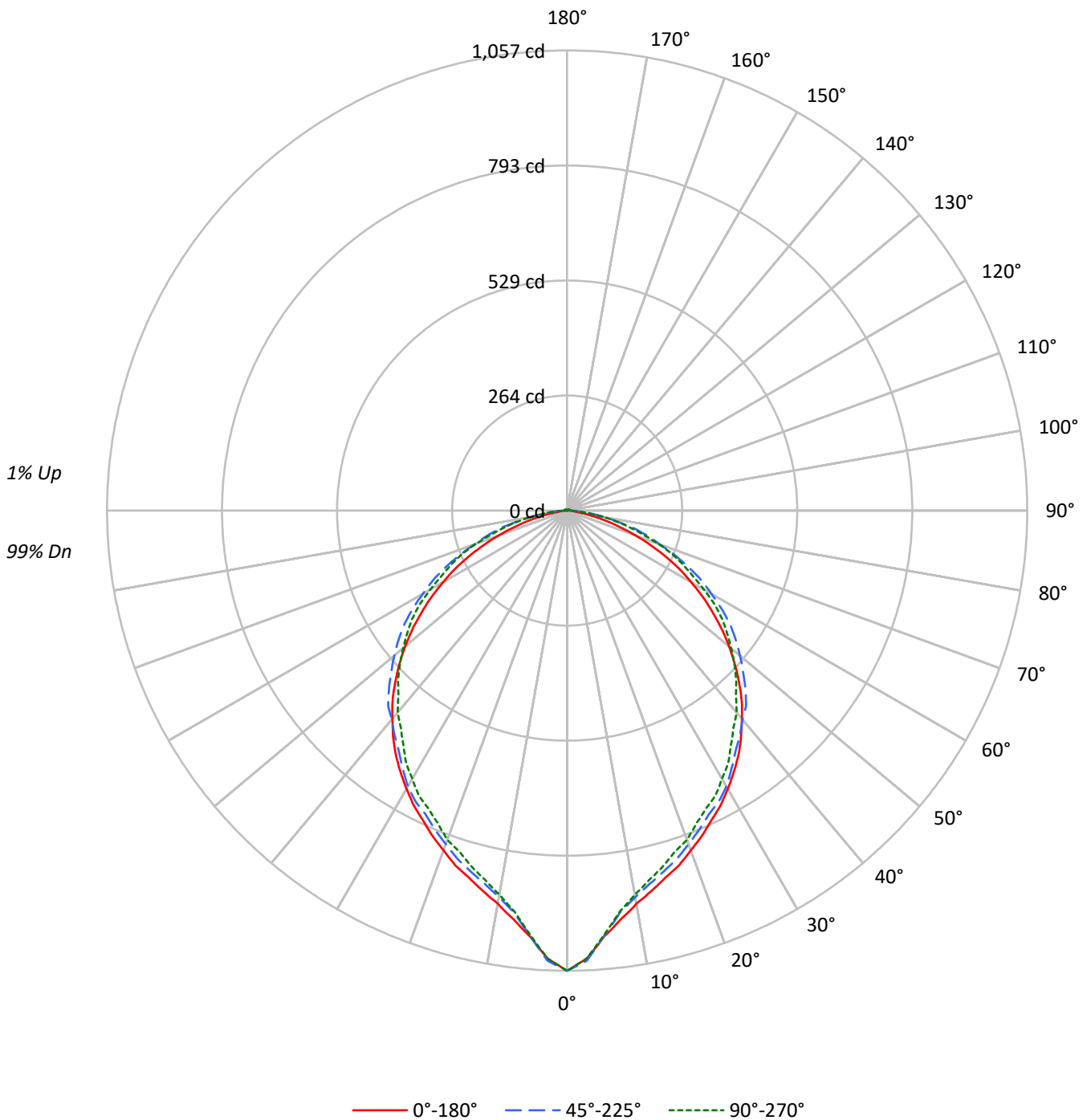
Lumens per Lamp: N/A
Luminaire Lumens: 2429.5 lumens
Efficiency: N/A
Efficacy: 104.3 lumens/watt
Spacing Criteria (0/90/45): 1.05 / 1.01 / 1.23
Luminous Opening: Rectangular (W 0.58' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 23.3
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

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Luminous Intensity Polar Plot





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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	96	106	102	98	95	98	94	92	94	91	89	90	88	86	84
2	99	91	84	79	97	89	83	78	85	80	76	82	78	74	79	75	72	70
3	91	80	72	66	88	78	71	65	75	69	64	73	67	63	70	65	61	59
4	83	71	62	56	81	70	62	55	67	60	55	65	59	54	62	57	53	51
5	76	64	55	48	74	62	54	48	60	53	47	58	52	47	56	51	46	44
6	71	57	48	42	69	56	48	42	54	47	41	53	46	41	51	45	41	39
7	65	52	43	37	64	51	43	37	50	42	37	48	41	36	47	41	36	34
8	61	48	39	33	59	47	39	33	45	38	33	44	37	33	43	37	32	30
9	57	44	35	30	56	43	35	30	42	35	30	41	34	29	40	34	29	27
10	53	40	32	27	52	40	32	27	39	32	27	38	31	27	37	31	27	25

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9752	9752	9752
5°	9092	9073	9053
10°	8592	8443	8393
15°	8334	8192	8091
20°	8150	8005	7901
25°	7986	7836	7685
30°	7861	7793	7579
35°	7725	7595	7392
40°	7521	7547	7291
45°	7290	7553	7166
50°	6970	7441	7060
55°	6566	7349	6992
60°	6065	7062	6691
65°	5438	6735	6412
70°	4548	6091	5978
75°	3401	5707	5329
80°	2030	4564	4452
85°	1006	3589	3028



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	91.1	3.7
10°-20°	242.8	10.0
20°-30°	355.7	14.6
30°-40°	422.3	17.4
40°-50°	436.1	18.0
50°-60°	391.9	16.1
60°-70°	286.2	11.8
70°-80°	150.1	6.2
80°-90°	35.8	1.5
90°-100°	7.2	0.3
100°-110°	4.5	0.2
110°-120°	2.8	0.1
120°-130°	2.0	0.1
130°-140°	1.0	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°	689.6	28.4
0°-40°	1111.9	45.8
0°-60°	1939.9	79.8
0°-90°	2412.1	99.3
90°-120°	14.5	0.6
90°-150°	17.5	0.7
90°-180°	17.0	0.7
0°-180°	2429.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1057	1057	1057	1057	1057	
5°	982	984	980	972	978	92
15°	872	872	858	858	847	246
25°	784	775	770	766	755	362
35°	686	683	674	668	656	428
45°	559	569	579	561	549	430
55°	408	433	457	447	435	365
65°	249	274	308	302	294	246
75°	95	130	160	155	150	103
85°	10	24	34	32	29	14
90°	0	8	10	8	6	1
95°	0	5	10	8	6	0
105°	1	2	5	6	6	1
115°	1	1	3	3	4	1
125°	1	1	2	3	3	1
135°	2	1	2	2	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



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1057.0	1057.0	1057.0	1057.0	1057.0
2.5°	1029.4	1034.7	1034.7	1031.6	1029.4
5°	981.7	983.9	979.6	972.2	977.5
7.5°	946.7	942.5	930.8	923.4	928.7
10°	917.1	912.8	901.2	890.6	895.9
12.5°	894.8	892.7	877.8	871.5	869.4
15°	872.5	871.5	857.7	857.7	847.1
17.5°	854.5	851.3	838.6	834.4	821.6
20°	830.1	830.1	815.3	806.8	804.7
22.5°	808.9	796.2	793.0	787.7	777.1
25°	784.5	775.0	769.7	765.5	754.9
27.5°	763.3	752.7	753.8	742.1	737.9
30°	737.9	730.5	731.5	718.8	711.4
32.5°	712.4	707.1	702.9	695.5	688.1
35°	685.9	682.8	674.3	667.9	656.3
37.5°	656.3	656.3	651.0	644.6	627.6
40°	624.5	624.5	626.6	612.8	605.4
42.5°	593.7	596.9	608.5	591.6	573.6
45°	558.7	569.3	578.9	560.8	549.2
47.5°	522.7	536.5	548.1	536.5	520.6
50°	485.6	506.8	518.4	505.7	491.9
52.5°	448.5	469.7	488.7	478.1	463.3
55°	408.2	432.6	456.9	447.4	434.7
57.5°	370.0	397.6	420.9	414.5	401.8
60°	328.7	357.3	382.7	377.4	362.6
62.5°	290.5	315.9	347.7	340.3	325.5
65°	249.1	273.5	308.5	302.2	293.7
67.5°	207.8	234.3	267.2	267.2	261.9
70°	168.6	198.3	225.8	233.2	221.6
72.5°	129.3	163.3	193.0	193.0	182.4
75°	95.4	130.4	160.1	154.8	149.5
77.5°	63.6	97.5	119.8	120.9	116.6
80°	38.2	66.8	85.9	89.1	83.8
82.5°	20.1	44.5	58.3	58.3	55.1
85°	9.5	24.4	33.9	31.8	28.6
87.5°	4.2	13.8	15.9	14.8	11.7
90°	0.0	8.5	9.5	8.5	6.4
92.5°	0.0	7.4	9.5	8.5	6.4
95°	0.0	5.3	9.5	8.5	6.4
97.5°	0.0	4.2	8.5	8.5	7.4
100°	0.0	3.2	7.4	7.4	7.4
102.5°	0.0	2.1	6.4	7.4	6.4
105°	1.1	2.1	5.3	6.4	6.4
107.5°	1.1	2.1	4.2	5.3	5.3
110°	1.1	2.1	3.2	4.2	5.3



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	1.1	2.1	3.2	4.2	4.2
115°	1.1	1.1	3.2	3.2	4.2
117.5°	1.1	2.1	3.2	3.2	4.2
120°	1.1	1.1	2.1	3.2	4.2
122.5°	1.1	1.1	2.1	3.2	4.2
125°	1.1	1.1	2.1	3.2	3.2
127.5°	2.1	1.1	2.1	3.2	3.2
130°	2.1	1.1	2.1	2.1	3.2
132.5°	2.1	1.1	2.1	2.1	3.2
135°	2.1	1.1	2.1	2.1	3.2
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)