

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: P239312

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

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P239312
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-STD-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

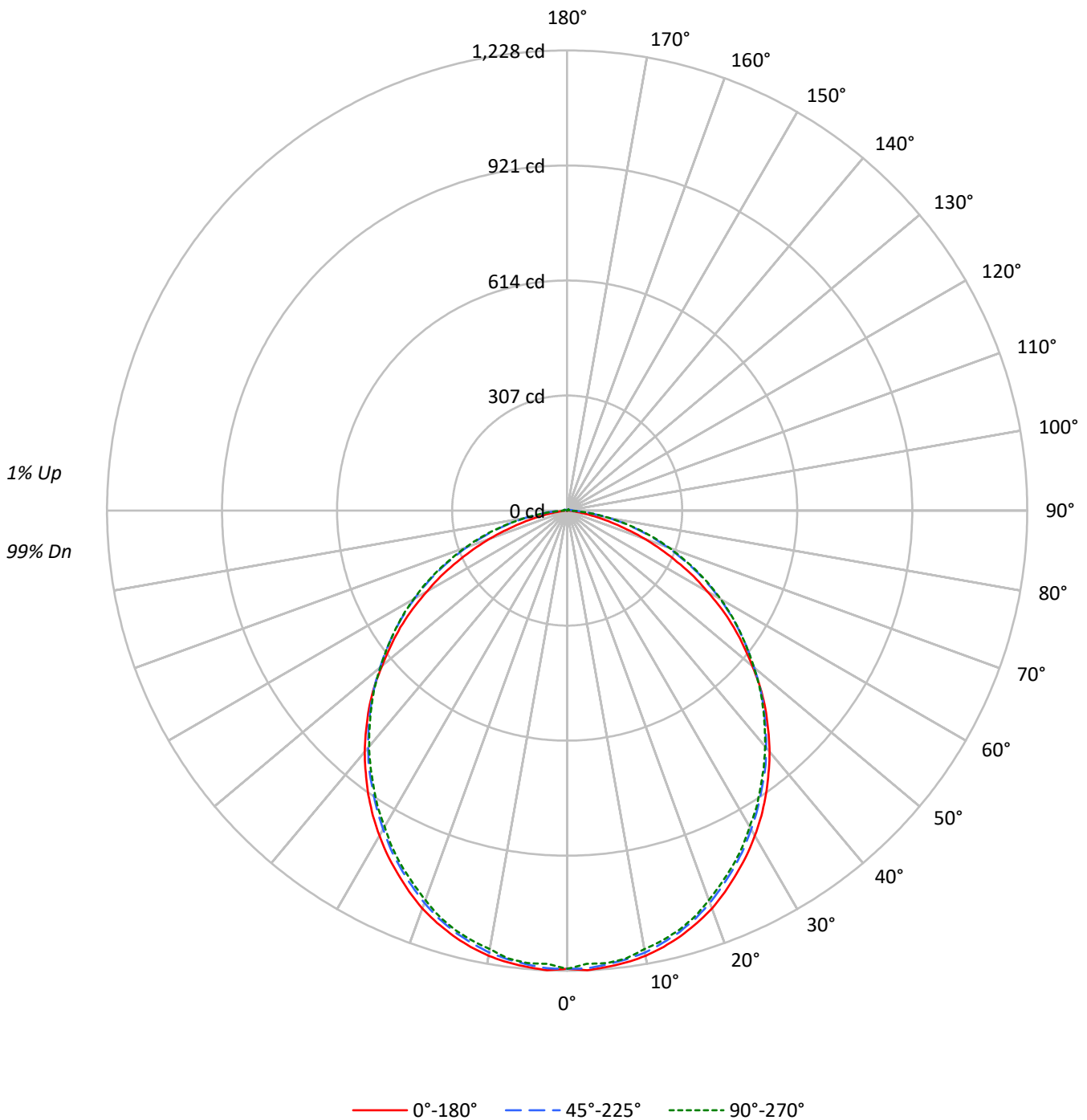
Lumens per Lamp: N/A
Luminaire Lumens: 3187.4 lumens
Efficiency: N/A
Efficacy: 89.3 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.19 / 1.31
Luminous Opening: Rectangular (W 0.58' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 35.7
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

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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	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°	11280	11280	11280
5°	11323	11262	11225
10°	11305	11219	11132
15°	11223	11110	11059
20°	11095	10940	10862
25°	10885	10710	10643
30°	10673	10462	10378
35°	10421	10198	10138
40°	10124	9950	9901
45°	9761	9675	9640
50°	9258	9353	9334
55°	8738	9035	9056
60°	7975	8682	8732
65°	7069	8224	8339
70°	5918	7629	7809
75°	4335	6926	7115
80°	2529	5967	6110
85°	1260	5039	4753



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	115.5	3.6
10°-20°	328.0	10.3
20°-30°	485.5	15.2
30°-40°	568.3	17.8
40°-50°	571.2	17.9
50°-60°	496.7	15.6
60°-70°	360.5	11.3
70°-80°	191.0	6.0
80°-90°	49.5	1.6
90°-100°	9.2	0.3
100°-110°	5.6	0.2
110°-120°	3.0	0.1
120°-130°	2.1	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°	929.0	29.1
0°-40°	1497.4	47.0
0°-60°	2565.3	80.5
0°-90°	3166.4	99.3
90°-120°	17.9	0.6
90°-150°	21.0	0.7
90°-180°	21.0	0.7
0°-180°	3187.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1223	1223	1223	1223	1223	
5°	1223	1221	1216	1211	1212	116
15°	1175	1170	1163	1159	1158	331
25°	1069	1061	1052	1047	1046	493
35°	925	913	905	901	900	578
45°	748	739	742	740	739	576
55°	543	543	562	566	563	484
65°	324	342	377	385	382	322
75°	122	160	194	202	200	133
85°	12	37	48	48	45	17
90°	0	12	13	12	8	1
95°	0	8	12	11	8	0
105°	0	3	7	8	7	1
115°	1	1	4	4	4	1
125°	1	1	3	3	4	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



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1222.6	1222.6	1222.6	1222.6	1222.6
2.5°	1227.9	1226.5	1222.6	1214.6	1210.7
5°	1222.6	1221.2	1216.0	1210.7	1212.0
7.5°	1216.0	1213.3	1208.0	1204.1	1205.4
10°	1206.7	1202.7	1197.5	1190.8	1188.2
12.5°	1192.2	1189.5	1181.6	1175.0	1175.0
15°	1175.0	1169.7	1163.1	1159.1	1157.8
17.5°	1153.8	1147.2	1140.6	1135.3	1135.3
20°	1130.0	1122.1	1114.2	1107.6	1106.3
22.5°	1101.0	1093.0	1083.8	1077.2	1075.9
25°	1069.3	1061.3	1052.1	1046.8	1045.5
27.5°	1037.5	1027.0	1019.0	1012.4	1012.4
30°	1001.8	991.3	982.0	976.7	974.1
32.5°	964.8	952.9	945.0	939.7	939.7
35°	925.2	913.3	905.4	901.4	900.1
37.5°	882.9	872.3	868.4	864.4	861.7
40°	840.6	830.0	826.1	823.4	822.1
42.5°	794.3	785.1	783.8	781.1	779.8
45°	748.1	738.8	741.5	740.1	738.8
47.5°	699.2	692.6	697.9	697.9	696.5
50°	645.0	642.3	651.6	654.2	650.3
52.5°	593.4	592.1	606.7	609.3	606.7
55°	543.2	543.2	561.7	565.7	563.0
57.5°	489.0	493.0	516.8	522.1	519.4
60°	432.2	442.8	470.5	475.8	473.2
62.5°	380.6	392.5	424.3	432.2	428.2
65°	323.8	342.3	376.7	384.6	382.0
67.5°	270.9	293.4	329.1	338.4	334.4
70°	219.4	245.8	282.8	290.8	289.5
72.5°	167.9	202.2	237.9	245.8	244.5
75°	121.6	159.9	194.3	202.2	199.6
77.5°	80.6	122.9	153.3	158.6	156.0
80°	47.6	89.9	112.3	116.3	115.0
82.5°	25.1	60.8	76.7	79.3	76.7
85°	11.9	37.0	47.6	47.6	44.9
87.5°	5.3	19.8	23.8	22.5	19.8
90°	0.0	11.9	13.2	11.9	7.9
92.5°	0.0	9.3	11.9	10.6	7.9
95°	0.0	7.9	11.9	10.6	7.9
97.5°	0.0	5.3	10.6	10.6	7.9
100°	0.0	4.0	9.3	10.6	7.9
102.5°	0.0	4.0	7.9	9.3	7.9
105°	0.0	2.6	6.6	7.9	6.6
107.5°	1.3	2.6	5.3	6.6	5.3
110°	1.3	2.6	4.0	5.3	5.3



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	1.3	1.3	4.0	5.3	4.0
115°	1.3	1.3	4.0	4.0	4.0
117.5°	1.3	1.3	2.6	4.0	4.0
120°	1.3	1.3	2.6	4.0	4.0
122.5°	1.3	1.3	2.6	4.0	4.0
125°	1.3	1.3	2.6	2.6	4.0
127.5°	1.3	1.3	2.6	2.6	2.6
130°	1.3	1.3	2.6	2.6	2.6
132.5°	1.3	1.3	2.6	2.6	2.6
135°	1.3	1.3	2.6	2.6	2.6
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)