

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: P239264

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

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P239264  
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-STD-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**

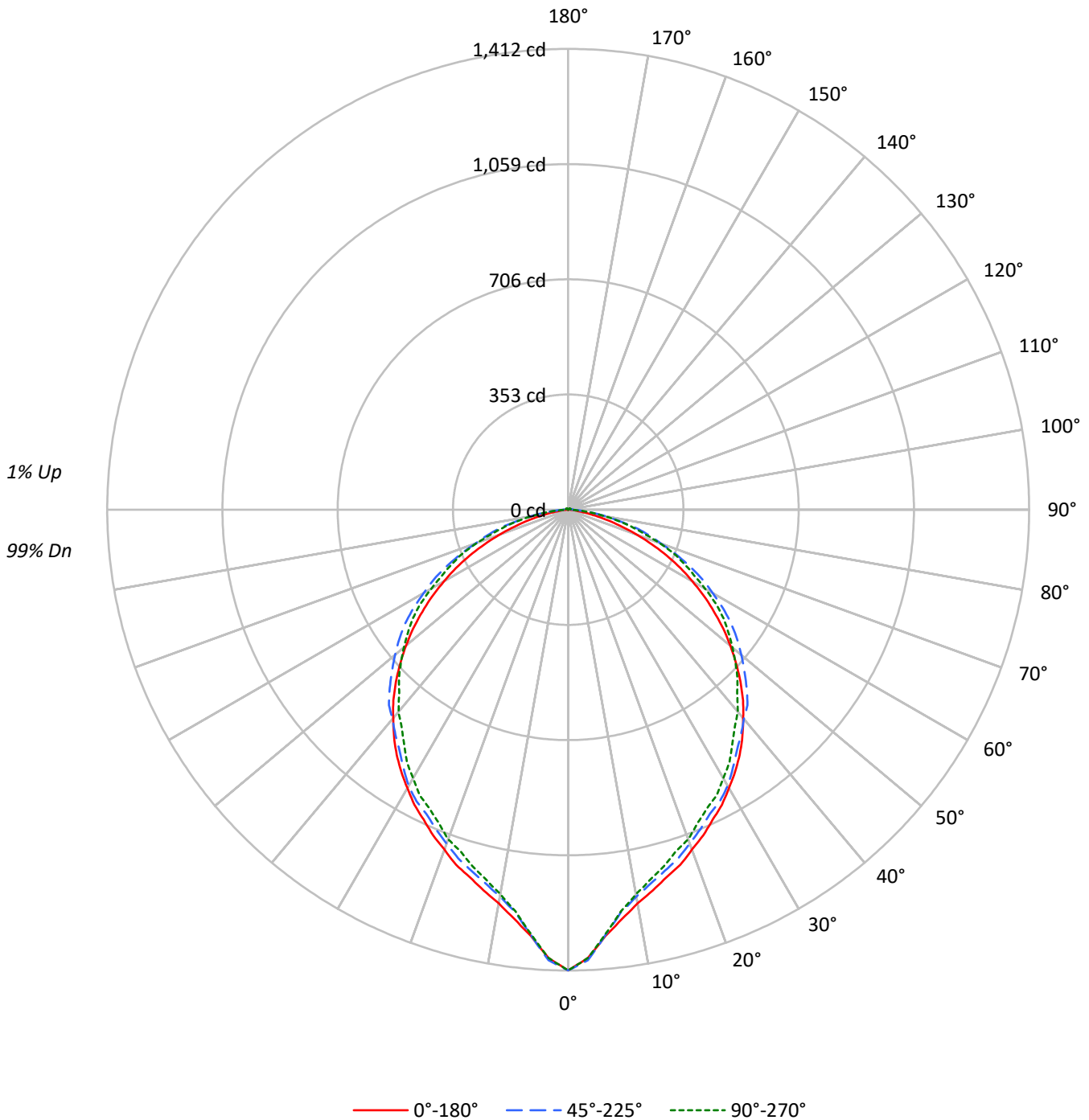
Lumens per Lamp: N/A  
Luminaire Lumens: 3244.3 lumens  
Efficiency: N/A  
Efficacy: 97.7 lumens/watt  
Spacing Criteria (0/90/45): 1.05 / 1.01 / 1.23  
Luminous Opening: Rectangular (W 0.58' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 33.2  
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°	13023	13023	13023
5°	12142	12116	12089
10°	11473	11274	11208
15°	11130	10940	10805
20°	10885	10689	10551
25°	10666	10464	10261
30°	10498	10407	10121
35°	10317	10141	9871
40°	10043	10077	9736
45°	9735	10086	9569
50°	9307	9937	9429
55°	8768	9815	9338
60°	8099	9431	8935
65°	7263	8994	8562
70°	6072	8136	7982
75°	4541	7621	7115
80°	2710	6094	5940
85°	1344	4795	4044



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	121.7	3.8
10°-20°	324.3	10.0
20°-30°	475.0	14.6
30°-40°	563.9	17.4
40°-50°	582.4	18.0
50°-60°	523.4	16.1
60°-70°	382.2	11.8
70°-80°	200.5	6.2
80°-90°	47.8	1.5
90°-100°	9.6	0.3
100°-110°	6.1	0.2
110°-120°	3.7	0.1
120°-130°	2.6	0.1
130°-140°	1.3	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°	920.9	28.4
0°-40°	1484.8	45.8
0°-60°	2590.6	79.8
0°-90°	3221.1	99.3
90°-120°	19.3	0.6
90°-150°	23.2	0.7
90°-180°	23.0	0.7
0°-180°	3244.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1412	1412	1412	1412	1412	
5°	1311	1314	1308	1298	1305	123
15°	1165	1164	1145	1145	1131	329
25°	1048	1035	1028	1022	1008	484
35°	916	912	900	892	876	572
45°	746	760	773	749	733	575
55°	545	578	610	598	580	488
65°	333	365	412	404	392	329
75°	127	174	214	207	200	138
85°	13	33	45	42	38	18
90°	0	11	13	11	8	1
95°	0	7	13	11	8	0
105°	1	3	7	8	8	1
115°	1	1	4	4	6	1
125°	1	1	3	4	4	2
135°	3	1	3	3	4	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°	1411.5	1411.5	1411.5	1411.5	1411.5
2.5°	1374.7	1381.8	1381.8	1377.6	1374.7
5°	1311.0	1313.8	1308.2	1298.3	1305.3
7.5°	1264.3	1258.6	1243.1	1233.1	1240.2
10°	1224.6	1219.0	1203.4	1189.3	1196.3
12.5°	1194.9	1192.1	1172.3	1163.8	1160.9
15°	1165.2	1163.8	1145.4	1145.4	1131.2
17.5°	1141.1	1136.9	1119.9	1114.2	1097.2
20°	1108.6	1108.6	1088.7	1077.4	1074.6
22.5°	1080.2	1063.2	1059.0	1051.9	1037.8
25°	1047.7	1034.9	1027.9	1022.2	1008.0
27.5°	1019.4	1005.2	1006.6	991.0	985.4
30°	985.4	975.5	976.9	959.9	950.0
32.5°	951.4	944.3	938.7	928.8	918.8
35°	916.0	911.8	900.4	891.9	876.4
37.5°	876.4	876.4	869.3	860.8	838.1
40°	833.9	833.9	836.7	818.3	808.4
42.5°	792.8	797.1	812.7	790.0	765.9
45°	746.1	760.3	773.0	748.9	733.4
47.5°	698.0	716.4	732.0	716.4	695.1
50°	648.4	676.7	692.3	675.3	656.9
52.5°	598.9	627.2	652.7	638.5	618.7
55°	545.1	577.6	610.2	597.5	580.5
57.5°	494.1	530.9	562.1	553.6	536.6
60°	438.9	477.1	511.1	504.0	484.2
62.5°	387.9	421.9	464.4	454.5	434.6
65°	332.7	365.3	412.0	403.5	392.2
67.5°	277.5	312.9	356.8	356.8	349.7
70°	225.1	264.8	301.6	311.5	295.9
72.5°	172.7	218.0	257.7	257.7	243.5
75°	127.4	174.1	213.8	206.7	199.6
77.5°	84.9	130.3	160.0	161.4	155.7
80°	51.0	89.2	114.7	118.9	111.8
82.5°	26.9	59.5	77.9	77.9	73.6
85°	12.7	32.6	45.3	42.5	38.2
87.5°	5.7	18.4	21.2	19.8	15.6
90°	0.0	11.3	12.7	11.3	8.5
92.5°	0.0	9.9	12.7	11.3	8.5
95°	0.0	7.1	12.7	11.3	8.5
97.5°	0.0	5.7	11.3	11.3	9.9
100°	0.0	4.2	9.9	9.9	9.9
102.5°	0.0	2.8	8.5	9.9	8.5
105°	1.4	2.8	7.1	8.5	8.5
107.5°	1.4	2.8	5.7	7.1	7.1
110°	1.4	2.8	4.2	5.7	7.1



TEST NUMBER: P239264

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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	1.4	2.8	4.2	5.7	5.7
115°	1.4	1.4	4.2	4.2	5.7
117.5°	1.4	2.8	4.2	4.2	5.7
120°	1.4	1.4	2.8	4.2	5.7
122.5°	1.4	1.4	2.8	4.2	5.7
125°	1.4	1.4	2.8	4.2	4.2
127.5°	2.8	1.4	2.8	4.2	4.2
130°	2.8	1.4	2.8	2.8	4.2
132.5°	2.8	1.4	2.8	2.8	4.2
135°	2.8	1.4	2.8	2.8	4.2
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)