

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: P239265

Luminaire Tested: **HDF-2-LD4-UNV-2-LO-30-IK12-EDC-1**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P239265  
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-30-IK12-EDC-1  
Description: FAILSAFE HDF LED FIXTURE  
2FT, 2-ROW LED BOARDS, CLEAR LENS  
Light Source: (84) 3000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

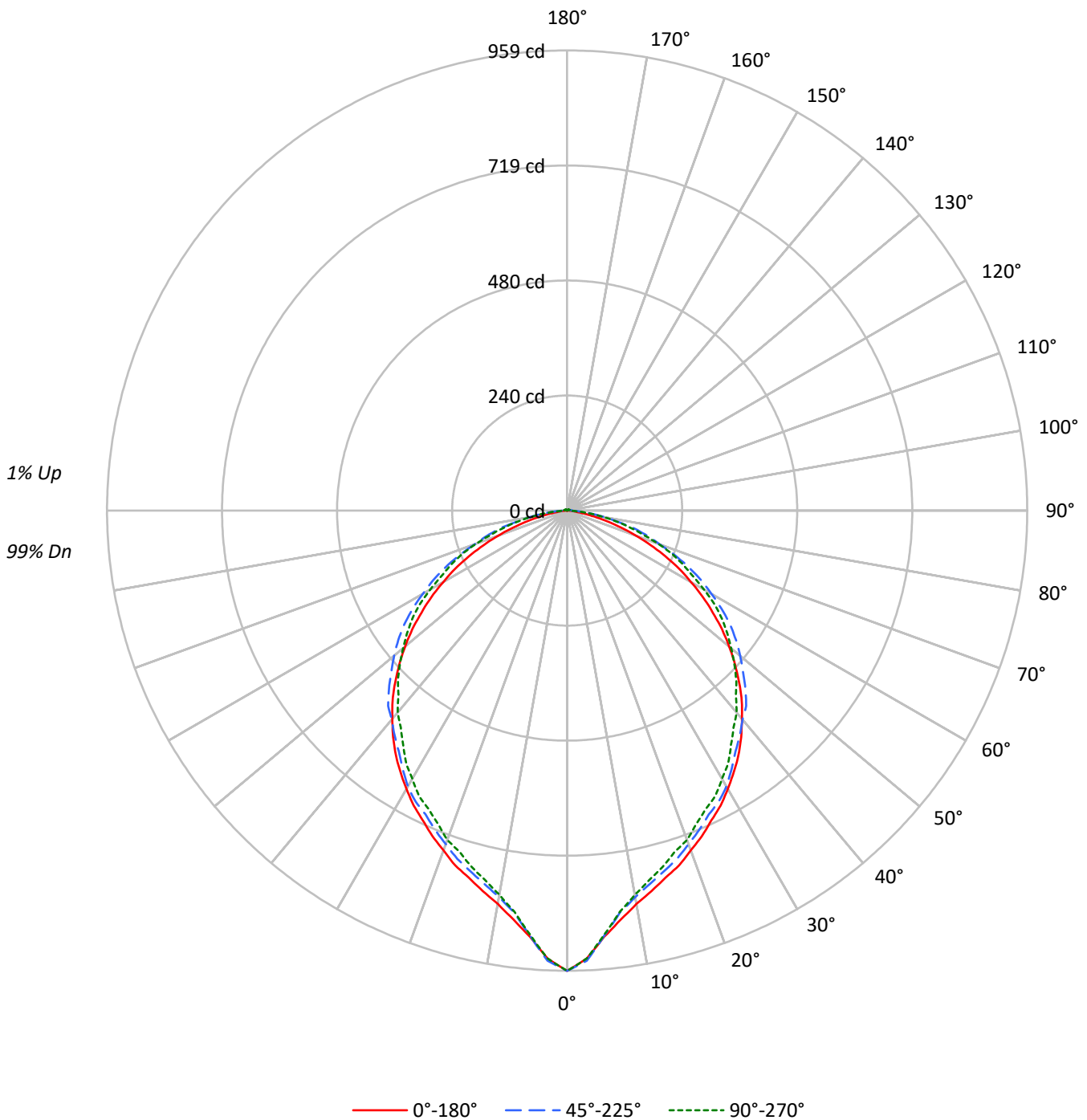
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2204.9 lumens  
Efficiency: N/A  
Efficacy: 94.6 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°	8851	8851	8851
5°	8252	8233	8216
10°	7797	7662	7617
15°	7564	7435	7343
20°	7397	7265	7170
25°	7248	7111	6974
30°	7135	7073	6878
35°	7011	6892	6708
40°	6825	6848	6617
45°	6617	6854	6503
50°	6326	6753	6407
55°	5958	6671	6346
60°	5504	6409	6073
65°	4936	6113	5818
70°	4127	5527	5425
75°	3087	5180	4837
80°	1838	4139	4038
85°	921	3260	2752



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	82.7	3.8
10°-20°	220.4	10.0
20°-30°	322.8	14.6
30°-40°	383.2	17.4
40°-50°	395.8	18.0
50°-60°	355.7	16.1
60°-70°	259.7	11.8
70°-80°	136.2	6.2
80°-90°	32.5	1.5
90°-100°	6.5	0.3
100°-110°	4.1	0.2
110°-120°	2.5	0.1
120°-130°	1.8	0.1
130°-140°	0.9	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°	625.8	28.4
0°-40°	1009.1	45.8
0°-60°	1760.6	79.8
0°-90°	2189.0	99.3
90°-120°	13.2	0.6
90°-150°	15.8	0.7
90°-180°	16.0	0.7
0°-180°	2204.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	959	959	959	959	959	
5°	891	893	889	882	887	83
15°	792	791	778	778	769	224
25°	712	703	698	695	685	329
35°	622	620	612	606	596	389
45°	507	517	525	509	498	391
55°	370	393	415	406	394	331
65°	226	248	280	274	266	223
75°	87	118	145	140	136	94
85°	9	22	31	29	26	13
90°	0	8	9	8	6	1
95°	0	5	9	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°	959.3	959.3	959.3	959.3	959.3
2.5°	934.3	939.1	939.1	936.2	934.3
5°	891.0	892.9	889.0	882.3	887.1
7.5°	859.2	855.4	844.8	838.1	842.9
10°	832.3	828.4	817.8	808.2	813.0
12.5°	812.1	810.1	796.7	790.9	789.0
15°	791.9	790.9	778.4	778.4	768.8
17.5°	775.5	772.6	761.1	757.2	745.7
20°	753.4	753.4	739.9	732.2	730.3
22.5°	734.1	722.6	719.7	714.9	705.3
25°	712.0	703.3	698.5	694.7	685.1
27.5°	692.8	683.1	684.1	673.5	669.7
30°	669.7	662.9	663.9	652.4	645.6
32.5°	646.6	641.8	637.9	631.2	624.4
35°	622.5	619.6	611.9	606.2	595.6
37.5°	595.6	595.6	590.8	585.0	569.6
40°	566.7	566.7	568.6	556.1	549.4
42.5°	538.8	541.7	552.3	536.9	520.5
45°	507.1	516.7	525.3	509.0	498.4
47.5°	474.4	486.9	497.4	486.9	472.4
50°	440.7	459.9	470.5	459.0	446.4
52.5°	407.0	426.2	443.6	433.9	420.5
55°	370.4	392.6	414.7	406.0	394.5
57.5°	335.8	360.8	382.0	376.2	364.7
60°	298.3	324.3	347.3	342.5	329.1
62.5°	263.6	286.7	315.6	308.9	295.4
65°	226.1	248.2	280.0	274.2	266.5
67.5°	188.6	212.6	242.5	242.5	237.7
70°	153.0	179.9	204.9	211.7	201.1
72.5°	117.4	148.2	175.1	175.1	165.5
75°	86.6	118.3	145.3	140.5	135.7
77.5°	57.7	88.5	108.7	109.7	105.8
80°	34.6	60.6	77.9	80.8	76.0
82.5°	18.3	40.4	52.9	52.9	50.0
85°	8.7	22.1	30.8	28.9	26.0
87.5°	3.8	12.5	14.4	13.5	10.6
90°	0.0	7.7	8.7	7.7	5.8
92.5°	0.0	6.7	8.7	7.7	5.8
95°	0.0	4.8	8.7	7.7	5.8
97.5°	0.0	3.8	7.7	7.7	6.7
100°	0.0	2.9	6.7	6.7	6.7
102.5°	0.0	1.9	5.8	6.7	5.8
105°	1.0	1.9	4.8	5.8	5.8
107.5°	1.0	1.9	3.8	4.8	4.8
110°	1.0	1.9	2.9	3.8	4.8



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**CANDELA DISTRIBUTION (continued):**

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