

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: P239285

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

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P239285  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1711-412-18)  
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-30-EDC-1  
Description: FAILSAFE HDF LED FIXTURE  
2FT, 1-ROW LED BOARDS, NON-OVERLAY  
Light Source: (42) 3000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

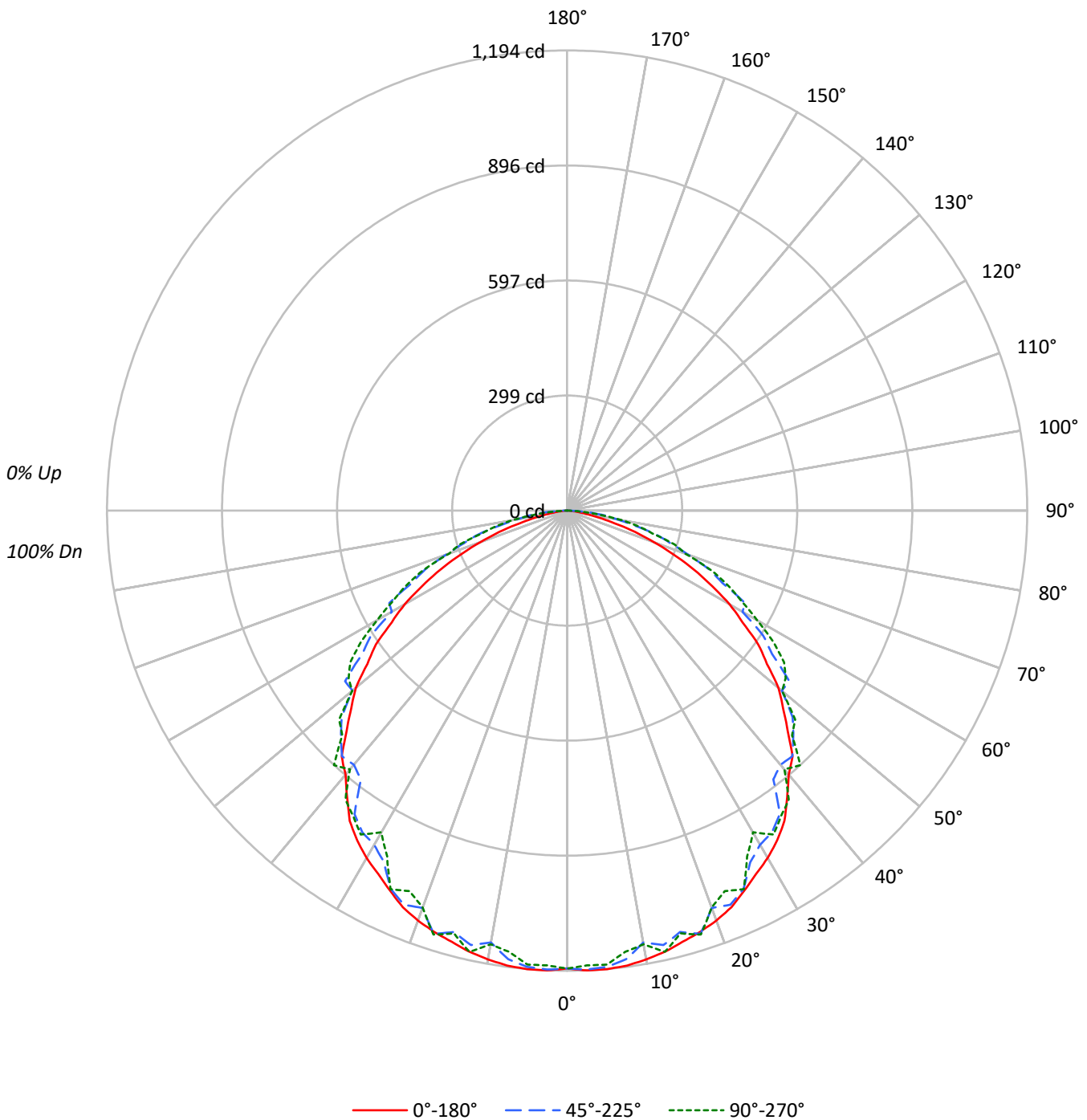
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3432.4 lumens  
Efficiency: N/A  
Efficacy: 96.1 lumens/watt  
Spacing Criteria (0/90/45): 1.3 / 1.28 / 1.41  
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	102	102	102	100
1	109	104	100	96	106	102	98	94	98	94	91	94	91	89	90	88	86	84
2	99	91	84	78	96	89	82	77	85	80	75	82	78	74	79	75	72	70
3	90	80	71	65	88	78	70	64	75	68	63	72	67	62	70	65	61	59
4	82	70	62	55	80	69	61	54	67	59	54	64	58	53	62	57	52	50
5	76	63	54	47	74	62	53	47	60	52	46	58	51	46	56	50	45	43
6	70	56	47	41	68	56	47	41	54	46	40	52	45	40	50	44	40	38
7	65	51	42	36	63	50	42	36	49	41	36	47	41	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	28	27
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	10964	10964	10964
5°	11061	11005	10950
10°	11076	10660	10705
15°	11064	10813	10847
20°	11114	10773	10761
25°	11072	11023	11035
30°	11088	10667	10271
35°	11075	10832	10899
40°	10773	10370	10557
45°	10561	10827	10764
50°	10276	10431	10448
55°	9740	10435	11052
60°	8983	9691	10511
65°	7931	9713	10079
70°	6501	8961	8767
75°	4574	8505	8163
80°	2614	7008	7709
85°	1270	6097	4954



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	112.2	3.3
10°-20°	323.2	9.4
20°-30°	491.1	14.3
30°-40°	599.0	17.5
40°-50°	631.0	18.4
50°-60°	569.5	16.6
60°-70°	424.4	12.4
70°-80°	225.5	6.6
80°-90°	56.6	1.6
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	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°	926.4	27.0
0°-40°	1525.4	44.4
0°-60°	2725.9	79.4
0°-90°	3432.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3432.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1188	1188	1188	1188	1188	
5°	1194	1196	1188	1186	1182	114
15°	1158	1131	1132	1133	1136	328
25°	1088	1056	1083	1044	1084	502
35°	983	959	962	964	968	611
45°	809	795	830	862	825	625
55°	606	580	649	685	687	536
65°	363	387	445	459	462	359
75°	128	191	239	237	229	143
85°	12	44	58	55	47	19
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1188.3	<i>1188.3</i>	1188.3	1188.3	1188.3
2.5°	1194.3	<i>1187.1</i>	1191.9	1183.5	1181.1
5°	<i>1194.3</i>	<i>1195.5</i>	<i>1188.3</i>	<i>1185.9</i>	<i>1182.3</i>
7.5°	1190.7	<i>1195.5</i>	1173.9	1134.4	1154.7
10°	1182.3	<i>1184.7</i>	1137.9	1151.1	1142.7
12.5°	1172.7	<i>1175.1</i>	1154.7	1152.3	1172.7
15°	1158.3	<i>1130.8</i>	1132.0	1133.2	1135.6
17.5°	1146.3	<i>1098.4</i>	1151.1	1146.3	1153.5
20°	1132.0	<i>1111.6</i>	1097.2	1118.8	1096.0
22.5°	1114.0	<i>1093.6</i>	1106.8	1070.8	1068.4
25°	1087.6	<i>1056.4</i>	1082.8	1044.4	1084.0
27.5°	1062.4	<i>1039.6</i>	1028.8	1058.8	1012.0
30°	1040.8	<i>1037.2</i>	1001.3	973.7	964.1
32.5°	1014.4	<i>992.9</i>	989.3	952.1	996.5
35°	983.3	<i>959.3</i>	961.7	964.1	967.7
37.5°	937.7	<i>952.1</i>	878.9	931.7	944.9
40°	894.5	<i>907.7</i>	861.0	907.7	876.5
42.5°	865.8	<i>835.8</i>	864.6	850.2	895.7
45°	809.4	<i>795.0</i>	829.8	862.2	825.0
47.5°	760.2	<i>739.8</i>	793.8	786.6	802.2
50°	715.9	<i>702.7</i>	726.7	755.4	727.9
52.5°	653.5	<i>659.5</i>	726.7	684.7	714.7
55°	605.5	<i>580.4</i>	648.7	684.7	687.1
57.5°	539.6	<i>527.6</i>	603.1	625.9	634.3
60°	486.8	<i>510.8</i>	525.2	585.2	569.6
62.5°	424.5	<i>448.5</i>	520.4	516.8	510.8
65°	363.3	<i>387.3</i>	444.9	459.3	461.7
67.5°	299.8	<i>348.9</i>	398.1	400.5	405.3
70°	241.0	<i>298.6</i>	332.2	350.1	325.0
72.5°	184.7	<i>229.0</i>	280.6	301.0	292.6
75°	128.3	<i>190.7</i>	238.6	237.4	229.0
77.5°	83.9	<i>147.5</i>	178.7	190.7	190.7
80°	49.2	<i>105.5</i>	131.9	148.7	145.1
82.5°	26.4	<i>69.5</i>	98.3	97.1	87.5
85°	12.0	<i>44.4</i>	57.6	55.2	46.8
87.5°	6.0	<i>25.2</i>	26.4	20.4	14.4
90°	0.0	<i>0.0</i>	0.0	0.0	0.0

(END OF REPORT)