

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: P239177

Luminaire Tested: **HDF-4-LD4-UNV-2-STD-30-EDC-1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P239177
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1711-412-3)
Test Lab: INNOVATION CENTER(G2)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: HDF-4-LD4-UNV-2-STD-30-EDC-1
Description: FAILSAFE HDF LED FIXTURE
4FT, 2-ROW LED BOARDS, NON-OVERLAY
Light Source: (168) 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

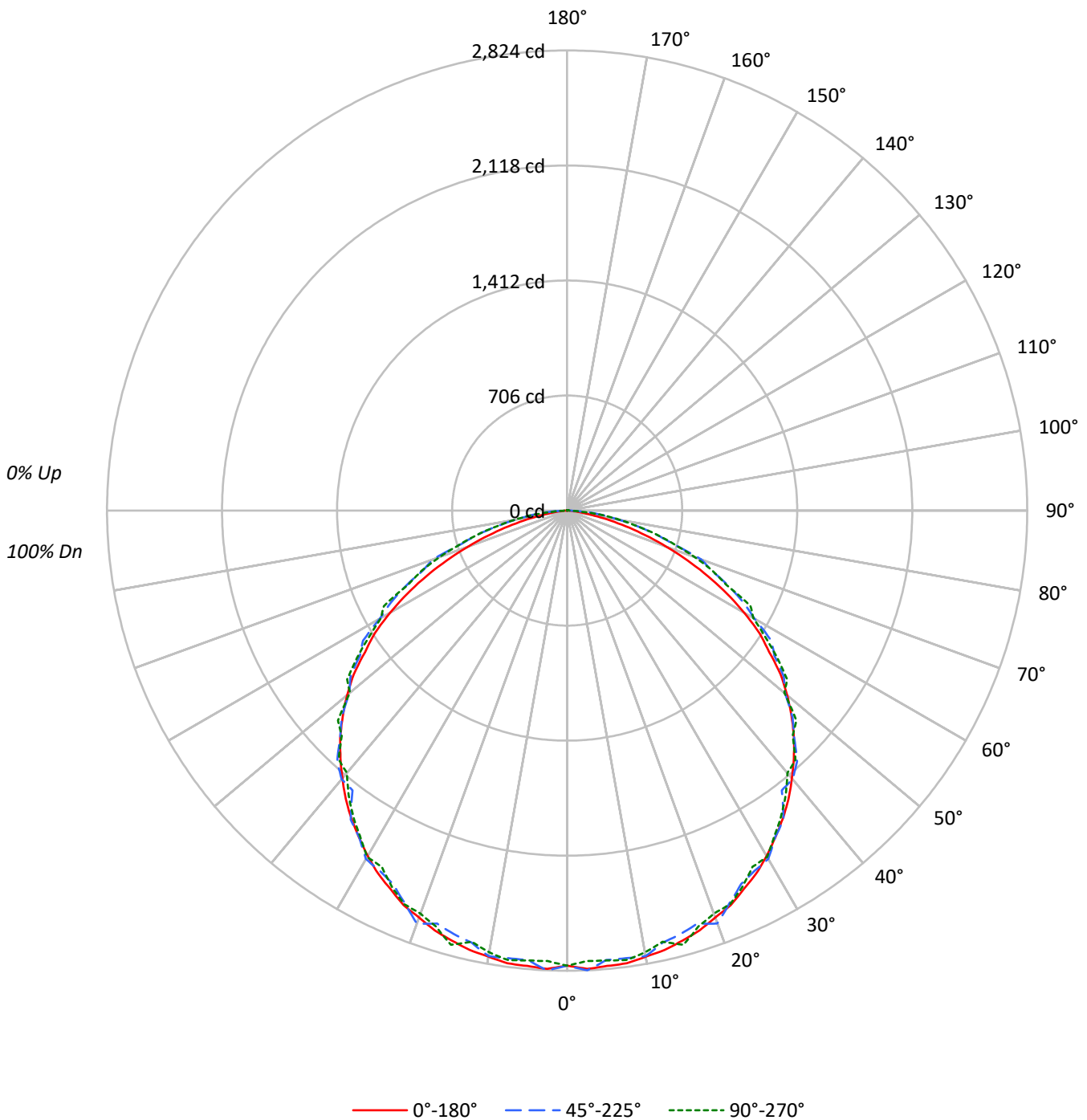
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8294.3 lumens
Efficiency: N/A
Efficacy: 123.4 lumens/watt
Spacing Criteria (0/90/45): 1.3 / 1.29 / 1.41
Luminous Opening: Rectangular (W 0.58' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 67.2
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		102	102	102	100
1	109	104	100	96	106	102	98	94	97	94	91		93	91	88		90	88	86	83
2	99	90	84	78	96	89	82	77	85	80	75		82	77	73		78	75	72	69
3	90	79	71	64	87	78	70	64	75	68	63		72	66	62		69	64	60	58
4	82	70	61	54	80	69	60	54	66	59	53		64	58	52		62	56	52	50
5	75	62	53	47	73	61	53	46	59	52	46		57	51	45		55	49	45	43
6	70	56	47	41	68	55	47	40	53	46	40		52	45	40		50	44	39	37
7	65	51	42	36	63	50	42	36	48	41	35		47	40	35		46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32		43	36	31		42	36	31	29
9	56	42	34	29	55	42	34	29	41	33	28		40	33	28		39	32	28	26
10	52	39	31	26	51	39	31	26	38	31	26		37	30	26		36	30	25	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	12882	12882	12882
5°	12990	12819	12831
10°	13021	13009	12896
15°	13050	12850	13178
20°	13046	13240	12921
25°	13047	12866	12963
30°	13037	13152	13071
35°	12995	13038	12895
40°	12923	12961	12662
45°	12845	12853	12762
50°	12651	12532	12486
55°	12181	12489	12652
60°	11578	12248	12166
65°	10420	11920	11740
70°	8755	11811	11227
75°	6623	10028	10163
80°	3956	8419	8825
85°	1752	7209	5859



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	265.0	3.2
10°-20°	764.0	9.2
20°-30°	1169.8	14.1
30°-40°	1431.7	17.3
40°-50°	1514.3	18.3
50°-60°	1384.5	16.7
60°-70°	1044.0	12.6
70°-80°	560.5	6.8
80°-90°	135.2	1.6
90°-100°	11.3	0.1
100°-110°	6.3	0.1
110°-120°	4.0	0.0
120°-130°	2.6	0.0
130°-140°	1.2	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°	2198.8	26.5
0°-40°	3630.5	43.8
0°-60°	6529.3	78.7
0°-90°	8268.9	99.7
90°-120°	21.6	0.3
90°-150°	25.4	0.3
90°-180°	25.0	0.3
0°-180°	8294.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2792	2792	2792	2792	2792	
5°	2805	2800	2768	2778	2771	267
15°	2733	2689	2691	2743	2759	772
25°	2563	2526	2528	2534	2547	1183
35°	2308	2318	2315	2291	2290	1443
45°	1969	1977	1970	1983	1956	1516
55°	1515	1488	1553	1580	1573	1358
65°	955	1003	1092	1120	1076	942
75°	372	490	563	577	570	401
85°	33	107	136	124	111	51
90°	0	20	18	15	13	1
95°	0	12	13	12	9	0
105°	0	4	8	8	6	0
115°	1	2	5	5	5	1
125°	1	1	4	4	4	1
135°	2	2	2	2	2	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



TEST NUMBER: P239177

CATALOG NUMBER: HDF-4-LD4-UNV-2-STD-30-EDC-1

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2792.4	2792.4	2792.4	2792.4	2792.4
2.5°	2815.3	2791.1	2824.2	2797.5	2767.0
5°	2805.1	2800.0	2768.2	2778.4	2770.8
7.5°	2802.6	2749.1	2770.8	2784.8	2782.2
10°	2779.7	2741.5	2777.1	2723.7	2753.0
12.5°	2761.9	2723.7	2714.8	2675.3	2709.7
15°	2732.6	2689.3	2690.6	2742.8	2759.3
17.5°	2702.0	2676.6	2657.5	2676.6	2676.6
20°	2657.5	2620.6	2697.0	2601.5	2632.0
22.5°	2621.9	2554.4	2606.6	2586.2	2614.2
25°	2563.3	2526.4	2527.7	2534.0	2546.8
27.5°	2512.4	2438.6	2492.0	2499.7	2464.0
30°	2447.5	2382.6	2469.1	2361.0	2453.9
32.5°	2377.5	2368.6	2376.2	2363.5	2367.3
35°	2307.5	2317.7	2315.1	2290.9	2289.7
37.5°	2232.4	2200.6	2163.7	2192.9	2203.1
40°	2145.9	2102.6	2152.2	2128.0	2102.6
42.5°	2059.3	2021.1	2088.6	2008.4	2074.6
45°	1968.9	1976.6	1970.2	1982.9	1956.2
47.5°	1868.4	1882.4	1876.0	1853.1	1907.9
50°	1762.8	1762.8	1746.2	1803.5	1739.8
52.5°	1650.8	1672.4	1676.2	1634.2	1701.7
55°	1514.6	1487.8	1552.8	1579.5	1573.1
57.5°	1398.8	1403.8	1485.3	1467.5	1440.8
60°	1254.9	1330.0	1327.5	1313.5	1318.6
62.5°	1107.3	1150.6	1219.3	1196.4	1268.9
65°	954.6	1002.9	1092.0	1120.0	1075.5
67.5°	799.3	878.2	955.8	952.0	966.0
70°	649.1	761.1	875.7	820.9	832.4
72.5°	504.0	619.8	680.9	728.0	688.6
75°	371.6	490.0	562.6	576.6	570.2
77.5°	250.7	371.6	437.8	442.9	436.6
80°	148.9	273.6	316.9	342.4	332.2
82.5°	76.4	180.7	229.1	227.8	221.5
85°	33.1	106.9	136.2	123.5	110.7
87.5°	10.2	57.3	44.5	28.0	22.9
90°	0.0	20.4	17.8	15.3	12.7
92.5°	0.0	14.0	14.0	12.7	10.2
95°	0.0	11.5	12.7	11.5	8.9
97.5°	0.0	8.9	11.5	10.2	8.9
100°	0.0	6.4	10.2	10.2	7.6
102.5°	0.0	5.1	8.9	8.9	7.6
105°	0.0	3.8	7.6	7.6	6.4
107.5°	0.0	3.8	6.4	7.6	6.4
110°	1.3	2.5	6.4	6.4	6.4



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	1.3	2.5	5.1	6.4	5.1
115°	1.3	2.5	5.1	5.1	5.1
117.5°	1.3	2.5	3.8	5.1	5.1
120°	1.3	2.5	3.8	3.8	3.8
122.5°	1.3	2.5	3.8	3.8	3.8
125°	1.3	1.3	3.8	3.8	3.8
127.5°	1.3	1.3	2.5	3.8	3.8
130°	2.5	1.3	2.5	3.8	3.8
132.5°	2.5	1.3	2.5	2.5	3.8
135°	2.5	2.5	2.5	2.5	2.5
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)