

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: P239204

Luminaire Tested: **HDF-4-LD4-UNV-2-STD-50-OPL-EDC-1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P239204
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1711-412-5)
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-50-OPL-EDC-1
Description: FAILSAFE HDF LED FIXTURE
4FT, 2-ROW LED BOARDS, OPAL LENS
Light Source: (168) 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

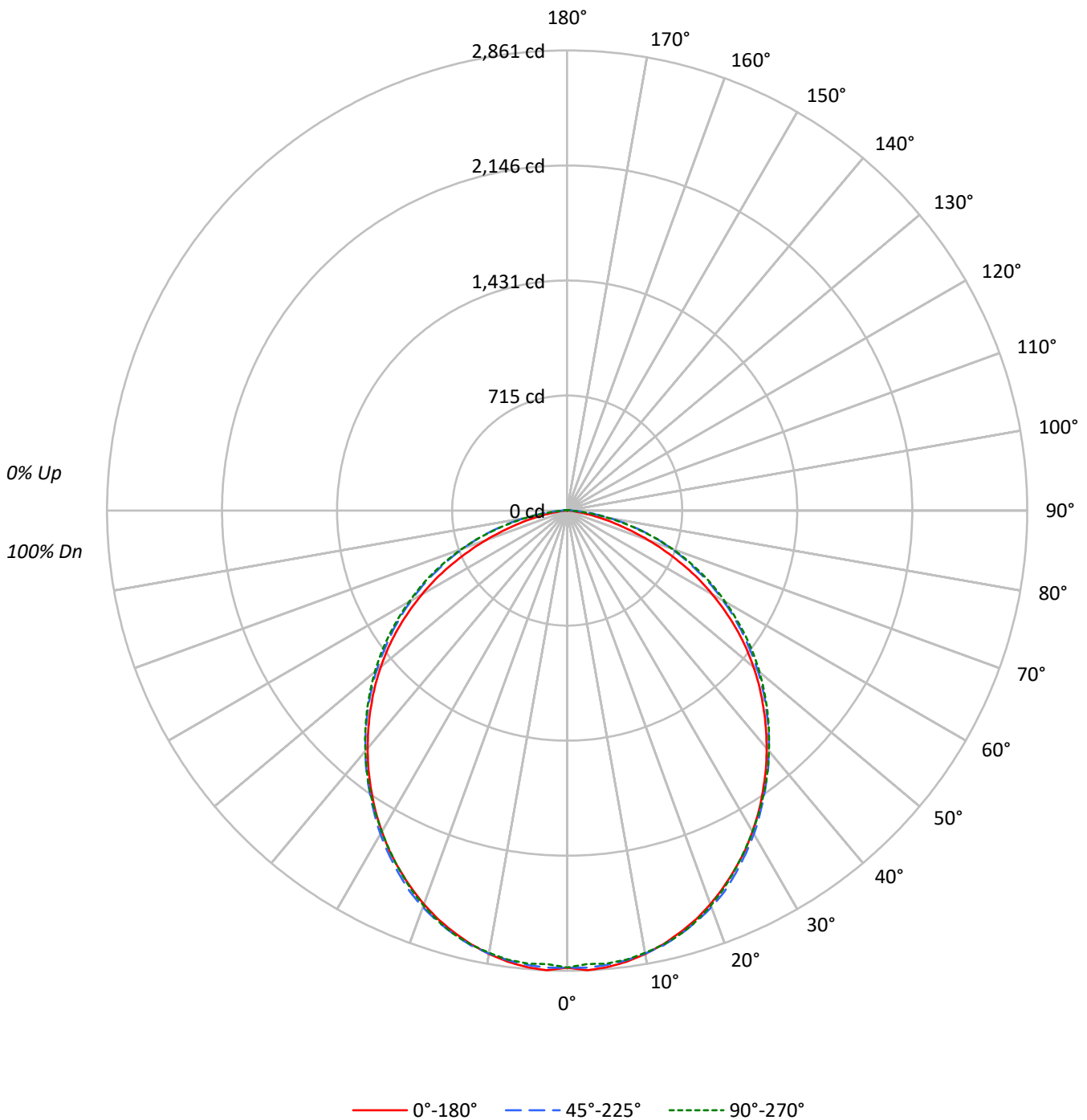
Lumens per Lamp: N/A
Luminaire Lumens: 7512.5 lumens
Efficiency: N/A
Efficacy: 111.8 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.21 / 1.32
Luminous Opening: Rectangular (W 0.58' x L: 4' x H: 0')
CIE Type: Direct

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	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	72	66	88	79	71	65	76	69	64	73	67	63	70	66	62	60
4	83	71	63	56	81	70	62	56	67	60	55	65	59	54	63	58	53	51
5	77	64	55	48	74	63	54	48	61	53	48	59	52	47	57	51	46	44
6	71	58	49	42	69	57	48	42	55	47	42	53	46	41	51	46	41	39
7	66	52	44	38	64	51	43	37	50	42	37	48	42	37	47	41	36	34
8	61	48	39	34	60	47	39	33	46	38	33	44	38	33	43	37	33	31
9	57	44	36	30	56	43	35	30	42	35	30	41	34	30	40	34	30	28
10	54	41	33	27	52	40	32	27	39	32	27	38	32	27	37	31	27	25

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13107	13107	13107
5°	13196	13131	13092
10°	13112	13099	13079
15°	12966	13020	13020
20°	12784	12881	12826
25°	12541	12642	12556
30°	12273	12370	12281
35°	11957	12052	12028
40°	11620	11747	11756
45°	11253	11436	11482
50°	10859	11101	11201
55°	10343	10726	10873
60°	9627	10338	10480
65°	8633	9812	10041
70°	7244	9288	9382
75°	5474	8473	8324
80°	3390	7154	6742
85°	1636	5420	4600



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	268.8	3.6
10°-20°	765.6	10.2
20°-30°	1136.4	15.1
30°-40°	1332.5	17.7
40°-50°	1345.8	17.9
50°-60°	1182.4	15.7
60°-70°	869.8	11.6
70°-80°	464.2	6.2
80°-90°	111.8	1.5
90°-100°	17.4	0.2
100°-110°	8.9	0.1
110°-120°	4.4	0.1
120°-130°	3.1	0.0
130°-140°	1.4	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°	2170.8	28.9
0°-40°	3503.3	46.6
0°-60°	6031.5	80.3
0°-90°	7477.3	99.5
90°-120°	30.6	0.4
90°-150°	35.2	0.5
90°-180°	35.0	0.5
0°-180°	7512.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2841	2841	2841	2841	2841	
5°	2850	2819	2836	2826	2827	270
15°	2715	2697	2726	2722	2726	766
25°	2464	2458	2484	2462	2467	1135
35°	2123	2126	2140	2125	2136	1328
45°	1725	1732	1753	1750	1760	1331
55°	1286	1296	1334	1345	1352	1147
65°	791	841	899	917	920	782
75°	307	408	475	475	467	333
85°	31	93	102	94	87	46
90°	0	24	25	21	18	1
95°	0	14	22	20	18	0
105°	1	4	10	13	13	1
115°	1	3	4	6	6	2
125°	3	3	4	4	4	3
135°	3	3	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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CATALOG NUMBER: HDF-4-LD4-UNV-2-STD-50-OPL-EDC-1

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2841.2	2841.2	2841.2	2841.2	2841.2
2.5°	2860.8	2830.0	2844.0	2835.6	2821.5
5°	2849.6	2818.7	2835.6	2825.8	2827.2
7.5°	2828.6	2801.9	2820.1	2813.1	2815.9
10°	2799.1	2773.9	2796.3	2790.7	2792.1
12.5°	2761.2	2738.8	2768.3	2761.2	2764.0
15°	2715.0	2696.7	2726.2	2722.0	2726.2
17.5°	2664.5	2649.1	2678.5	2671.5	2674.3
20°	2604.2	2591.6	2623.8	2607.0	2612.6
22.5°	2536.9	2528.5	2560.7	2539.7	2543.9
25°	2463.9	2458.3	2483.6	2462.5	2466.7
27.5°	2389.6	2381.2	2405.0	2382.6	2385.4
30°	2304.1	2301.3	2322.3	2298.5	2305.5
32.5°	2217.1	2217.1	2232.6	2212.9	2222.7
35°	2123.2	2126.0	2140.0	2124.6	2135.8
37.5°	2029.2	2032.0	2048.8	2034.8	2046.0
40°	1929.6	1933.9	1950.7	1942.3	1952.1
42.5°	1828.7	1835.7	1853.9	1848.3	1856.7
45°	1724.9	1731.9	1752.9	1750.1	1760.0
47.5°	1621.1	1626.7	1650.6	1653.4	1661.8
50°	1513.1	1517.4	1546.8	1553.8	1560.8
52.5°	1402.4	1408.0	1438.8	1450.0	1458.5
55°	1286.0	1295.8	1333.6	1344.9	1351.9
57.5°	1164.0	1183.6	1227.1	1236.9	1242.5
60°	1043.4	1065.8	1120.5	1133.1	1135.9
62.5°	921.3	956.4	1015.3	1026.5	1029.3
65°	790.9	841.4	898.9	917.1	919.9
67.5°	661.9	729.2	793.7	807.8	807.8
70°	537.1	618.4	688.6	697.0	695.6
72.5°	419.3	511.9	580.6	587.6	584.8
75°	307.1	408.1	475.4	475.4	467.0
77.5°	207.5	312.7	368.8	366.0	360.4
80°	127.6	228.6	269.3	262.2	253.8
82.5°	68.7	157.1	178.1	169.7	161.3
85°	30.9	92.6	102.4	94.0	86.9
87.5°	8.4	47.7	47.7	42.1	39.3
90°	0.0	23.8	25.2	21.0	18.2
92.5°	0.0	18.2	23.8	19.6	18.2
95°	0.0	14.0	22.4	19.6	18.2
97.5°	0.0	9.8	19.6	18.2	16.8
100°	0.0	7.0	15.4	16.8	15.4
102.5°	0.0	5.6	12.6	14.0	14.0
105°	1.4	4.2	9.8	12.6	12.6
107.5°	1.4	4.2	7.0	9.8	9.8
110°	1.4	2.8	5.6	8.4	8.4



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	1.4	2.8	5.6	7.0	7.0
115°	1.4	2.8	4.2	5.6	5.6
117.5°	1.4	2.8	4.2	5.6	5.6
120°	2.8	2.8	4.2	4.2	4.2
122.5°	2.8	2.8	4.2	4.2	4.2
125°	2.8	2.8	4.2	4.2	4.2
127.5°	2.8	2.8	2.8	4.2	4.2
130°	2.8	2.8	2.8	2.8	4.2
132.5°	2.8	2.8	2.8	2.8	2.8
135°	2.8	2.8	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)