

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: P239192

Luminaire Tested: **HDF-4-LD4-UNV-2-STD-50-IK12-EDC-1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P239192
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1711-412-4)
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-IK12-EDC-1
Description: FAILSAFE HDF LED FIXTURE
4FT, 2-ROW LED BOARDS, CLEAR LENS
Light Source: (168) 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

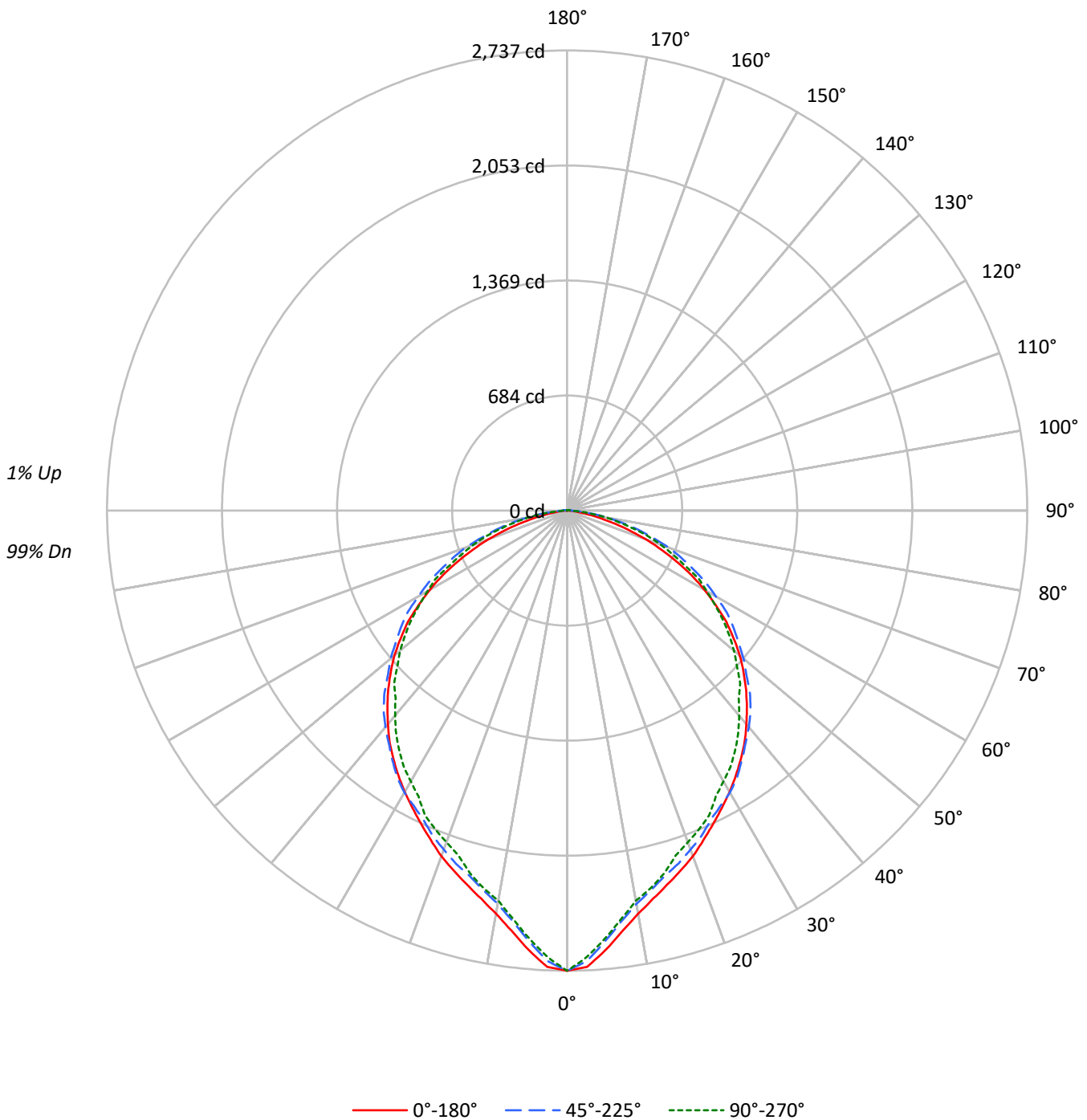
Lumens per Lamp: N/A
Luminaire Lumens: 6452.3 lumens
Efficiency: N/A
Efficacy: 96.0 lumens/watt
Spacing Criteria (0/90/45): 1.06 / 1.02 / 1.25
Luminous Opening: Rectangular (W 0.58' x L: 4' x H: 0')
CIE Type: Direct

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	99
1	109	104	100	96	106	102	98	95	97	94	91	93	91	89	90	88	86	84
2	99	91	84	78	96	89	83	77	85	80	76	82	78	74	79	75	72	70
3	90	80	72	65	88	78	71	65	75	69	63	72	67	62	70	65	61	59
4	83	71	62	55	80	69	61	55	67	60	54	64	58	53	62	57	53	50
5	76	63	54	48	74	62	54	47	60	53	47	58	51	46	56	50	46	44
6	70	57	48	42	68	56	48	42	54	47	41	52	46	41	51	45	40	38
7	65	52	43	37	63	51	43	37	49	42	36	48	41	36	46	40	36	34
8	61	47	39	33	59	47	38	33	45	38	33	44	37	32	43	37	32	30
9	57	43	35	30	55	43	35	30	42	34	29	40	34	29	39	33	29	27
10	53	40	32	27	52	40	32	27	39	32	27	38	31	27	37	31	26	25

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	12627	12627	12627
5°	12150	11916	11844
10°	11403	11127	11035
15°	10996	10735	10662
20°	10739	10533	10305
25°	10464	10307	10178
30°	10293	10315	9905
35°	10148	10203	9808
40°	9990	10125	9585
45°	9816	10027	9496
50°	9621	9832	9299
55°	9305	9700	9090
60°	8707	9419	8850
65°	7853	9046	8403
70°	6658	8643	7982
75°	4950	7723	7122
80°	3092	6408	6110
85°	1408	4822	4451



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	239.4	3.7
10°-20°	635.4	9.8
20°-30°	934.0	14.5
30°-40°	1116.1	17.3
40°-50°	1153.0	17.9
50°-60°	1044.3	16.2
60°-70°	780.3	12.1
70°-80°	416.7	6.5
80°-90°	100.2	1.6
90°-100°	16.2	0.3
100°-110°	8.2	0.1
110°-120°	4.1	0.1
120°-130°	2.9	0.0
130°-140°	1.5	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°	1808.8	28.0
0°-40°	2924.9	45.3
0°-60°	5122.2	79.4
0°-90°	6419.4	99.5
90°-120°	28.5	0.4
90°-150°	32.9	0.5
90°-180°	33.0	0.5
0°-180°	6452.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2737	2737	2737	2737	2737	
5°	2624	2570	2573	2556	2558	244
15°	2302	2259	2248	2230	2232	650
25°	2056	2040	2025	2008	2000	949
35°	1802	1795	1812	1768	1742	1127
45°	1505	1505	1537	1460	1456	1160
55°	1157	1170	1206	1162	1130	1027
65°	719	771	829	810	770	711
75°	278	372	433	429	400	305
85°	27	77	91	88	84	41
90°	0	22	24	21	20	1
95°	0	13	20	18	17	0
105°	1	4	8	11	11	1
115°	1	3	4	6	6	2
125°	3	3	3	3	4	3
135°	3	3	3	3	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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CATALOG NUMBER: HDF-4-LD4-UNV-2-STD-50-IK12-EDC-1

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2737.2	2737.2	2737.2	2737.2	2737.2
2.5°	2716.2	2676.9	2681.2	2672.7	2658.7
5°	2623.7	2570.4	2573.2	2556.3	2557.8
7.5°	2521.3	2466.6	2465.2	2438.6	2451.2
10°	2434.4	2392.3	2375.5	2351.6	2355.8
12.5°	2364.2	2316.6	2309.5	2280.1	2299.7
15°	2302.5	2259.1	2247.8	2229.6	2232.4
17.5°	2245.0	2210.0	2201.6	2177.7	2149.7
20°	2187.6	2149.7	2145.5	2103.4	2099.2
22.5°	2120.2	2102.0	2092.2	2064.2	2051.5
25°	2055.7	2040.3	2024.9	2008.1	1999.6
27.5°	1992.6	1975.8	1978.6	1954.8	1915.5
30°	1932.3	1916.9	1936.5	1883.3	1859.4
32.5°	1867.8	1858.0	1880.5	1831.4	1807.5
35°	1801.9	1794.9	1811.7	1768.3	1741.6
37.5°	1734.6	1720.6	1743.0	1688.3	1671.5
40°	1658.9	1651.9	1681.3	1611.2	1591.6
42.5°	1581.8	1573.4	1615.4	1531.3	1510.3
45°	1504.6	1504.6	1536.9	1459.8	1455.6
47.5°	1423.3	1426.1	1445.7	1409.3	1368.6
50°	1340.6	1343.4	1370.0	1323.7	1295.7
52.5°	1248.0	1256.4	1283.1	1248.0	1214.4
55°	1156.9	1169.5	1206.0	1162.5	1130.2
57.5°	1047.5	1078.4	1124.6	1079.8	1040.5
60°	943.7	983.0	1020.9	990.0	959.2
62.5°	834.4	880.6	931.1	900.3	884.8
65°	719.4	771.3	828.7	810.5	769.8
67.5°	605.8	657.7	734.8	708.1	677.3
70°	493.6	560.9	640.8	610.0	591.8
72.5°	382.8	465.6	528.7	521.6	500.6
75°	277.7	371.6	433.3	429.1	399.6
77.5°	192.1	284.7	336.5	321.1	305.7
80°	116.4	204.7	241.2	231.4	230.0
82.5°	61.7	131.8	158.5	154.3	148.6
85°	26.6	77.1	91.1	88.3	84.1
87.5°	8.4	39.3	44.9	40.7	37.9
90°	0.0	22.4	23.8	21.0	19.6
92.5°	0.0	16.8	21.0	18.2	16.8
95°	0.0	12.6	19.6	18.2	16.8
97.5°	1.4	9.8	18.2	16.8	16.8
100°	0.0	7.0	14.0	15.4	14.0
102.5°	1.4	5.6	11.2	12.6	12.6
105°	1.4	4.2	8.4	11.2	11.2
107.5°	1.4	2.8	7.0	9.8	9.8
110°	1.4	2.8	5.6	7.0	8.4



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CANDELA DISTRIBUTION (continued):

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