

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: P239247

Luminaire Tested: **HDF-2-LD4-UNV-2-HI-40-EDC-1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P239247
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1711-412-13)
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-HI-40-EDC-1
Description: FAILSAFE HDF LED FIXTURE
2FT, 2-ROW LED BOARDS, NON-OVERLAY
Light Source: (84) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

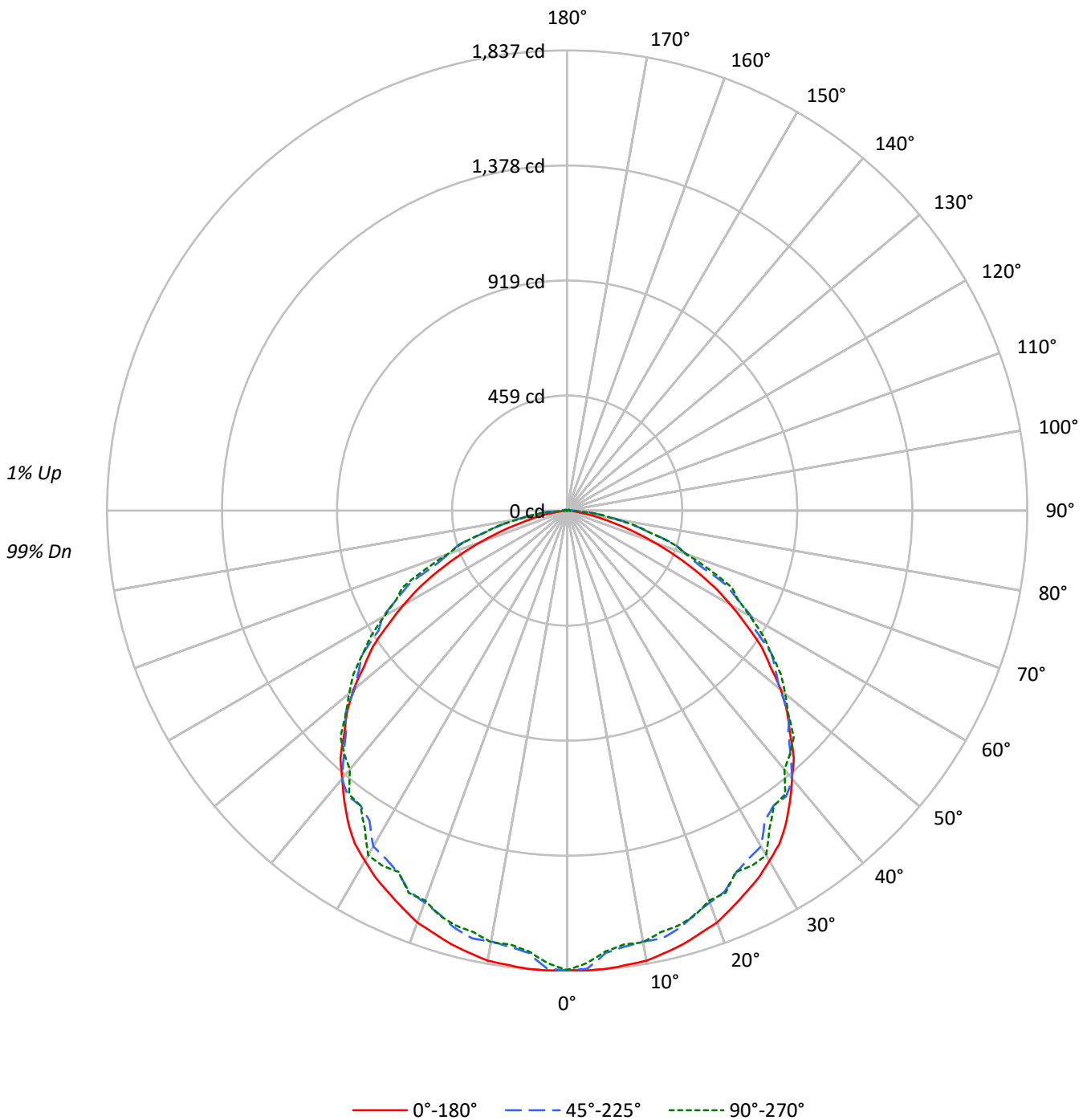
Lumens per Lamp: N/A
Luminaire Lumens: 5250.0 lumens
Efficiency: N/A
Efficacy: 119.6 lumens/watt
Spacing Criteria (0/90/45): 1.31 / 1.26 / 1.39
Luminous Opening: Rectangular (W 0.58' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 43.9
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	94	97	94	91	93	91	88	90	87	86	83
2	99	91	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	69
3	90	79	71	65	87	78	70	64	75	68	63	72	66	62	69	65	61	58
4	82	70	61	55	80	69	61	54	66	59	54	64	58	53	62	56	52	50
5	76	63	54	47	74	62	53	47	59	52	46	57	51	46	55	50	45	43
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	37
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33
8	60	47	38	32	59	46	38	32	44	37	32	43	36	32	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	29	40	33	28	39	33	28	26
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°	16923	16923	16923
5°	17002	16414	16354
10°	17092	16360	16391
15°	17116	16494	16385
20°	17178	16347	16267
25°	17148	16236	16204
30°	17200	16488	16922
35°	17157	16186	16204
40°	16818	16837	16250
45°	16415	16288	16691
50°	16001	15885	16306
55°	15236	16021	15995
60°	13935	15707	15526
65°	12258	15208	15810
70°	9922	13523	13609
75°	6905	12298	12298
80°	3889	10982	10377
85°	1895	9824	7929



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	170.2	3.2
10°-20°	487.6	9.3
20°-30°	746.9	14.2
30°-40°	917.0	17.5
40°-50°	961.2	18.3
50°-60°	867.0	16.5
60°-70°	641.9	12.2
70°-80°	340.5	6.5
80°-90°	88.7	1.7
90°-100°	12.9	0.2
100°-110°	7.5	0.1
110°-120°	4.6	0.1
120°-130°	2.8	0.1
130°-140°	1.3	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°	1404.7	26.8
0°-40°	2321.6	44.2
0°-60°	4149.8	79.0
0°-90°	5220.9	99.4
90°-120°	25.0	0.5
90°-150°	29.1	0.6
90°-180°	29.0	0.6
0°-180°	5250.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1834	1834	1834	1834	1834	
5°	1836	1829	1772	1750	1766	175
15°	1792	1722	1727	1706	1715	506
25°	1684	1628	1595	1592	1592	778
35°	1523	1435	1437	1473	1439	950
45°	1258	1222	1248	1256	1279	974
55°	947	952	996	1014	994	838
65°	562	591	697	672	724	556
75°	194	288	345	369	345	215
85°	18	70	93	91	75	27
90°	0	21	21	16	10	1
95°	0	13	16	13	8	0
105°	0	5	10	10	6	1
115°	2	3	6	6	5	2
125°	2	2	3	5	3	1
135°	2	2	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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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1834.2	1834.2	1834.2	1834.2	1834.2
2.5°	1837.4	1834.2	1830.9	1817.9	1808.1
5°	1835.8	1829.3	1772.3	1749.6	1765.8
7.5°	1829.3	1803.3	1756.1	1747.9	1746.3
10°	1824.4	1760.9	1746.3	1757.7	1749.6
12.5°	1808.1	1734.9	1749.6	1736.5	1723.5
15°	1791.9	1721.9	1726.8	1705.6	1715.4
17.5°	1769.1	1695.8	1691.0	1708.9	1694.2
20°	1749.6	1664.9	1664.9	1655.2	1656.8
22.5°	1717.0	1655.2	1645.4	1651.9	1651.9
25°	1684.5	1627.5	1594.9	1591.7	1591.7
27.5°	1653.5	1577.0	1567.3	1551.0	1598.2
30°	1614.5	1526.6	1547.7	1570.5	1588.4
32.5°	1577.0	1477.8	1468.0	1554.3	1503.8
35°	1523.3	1435.4	1437.1	1472.9	1438.7
37.5°	1461.5	1398.0	1437.1	1404.5	1428.9
40°	1396.4	1329.7	1398.0	1375.2	1349.2
42.5°	1339.4	1258.1	1318.3	1300.4	1316.6
45°	1258.1	1222.2	1248.3	1256.4	1279.2
47.5°	1191.3	1147.4	1201.1	1225.5	1196.2
50°	1114.8	1049.7	1106.7	1129.5	1136.0
52.5°	1022.1	991.1	1048.1	1083.9	1075.8
55°	947.2	952.1	996.0	1013.9	994.4
57.5°	846.3	877.2	893.5	911.4	926.0
60°	755.2	764.9	851.2	841.4	841.4
62.5°	664.0	691.7	766.5	776.3	768.2
65°	561.5	590.8	696.6	672.2	724.2
67.5°	463.8	504.5	569.6	638.0	611.9
70°	367.8	434.5	501.3	528.9	504.5
72.5°	276.7	354.8	454.1	437.8	445.9
75°	193.7	288.1	345.0	369.4	345.0
77.5°	125.3	213.2	271.8	291.3	279.9
80°	73.2	161.1	206.7	214.8	195.3
82.5°	39.1	109.0	143.2	144.8	143.2
85°	17.9	70.0	92.8	91.1	74.9
87.5°	8.1	42.3	39.1	29.3	21.2
90°	0.0	21.2	21.2	16.3	9.8
92.5°	0.0	16.3	17.9	14.6	8.1
95°	0.0	13.0	16.3	13.0	8.1
97.5°	0.0	9.8	14.6	11.4	8.1
100°	0.0	8.1	13.0	11.4	6.5
102.5°	0.0	6.5	11.4	9.8	6.5
105°	0.0	4.9	9.8	9.8	6.5
107.5°	1.6	3.3	9.8	8.1	6.5
110°	1.6	3.3	8.1	8.1	4.9



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	1.6	3.3	6.5	6.5	4.9
115°	1.6	3.3	6.5	6.5	4.9
117.5°	1.6	1.6	4.9	6.5	4.9
120°	1.6	1.6	4.9	4.9	4.9
122.5°	1.6	1.6	3.3	4.9	4.9
125°	1.6	1.6	3.3	4.9	3.3
127.5°	1.6	1.6	3.3	4.9	3.3
130°	1.6	1.6	3.3	3.3	3.3
132.5°	1.6	1.6	3.3	3.3	3.3
135°	1.6	1.6	3.3	3.3	3.3
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)