

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: P239248

Luminaire Tested: **HDF-2-LD4-UNV-2-HI-50-EDC-1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P239248
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-50-EDC-1
Description: FAILSAFE HDF LED FIXTURE
2FT, 2-ROW LED BOARDS, NON-OVERLAY
Light Source: (84) 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

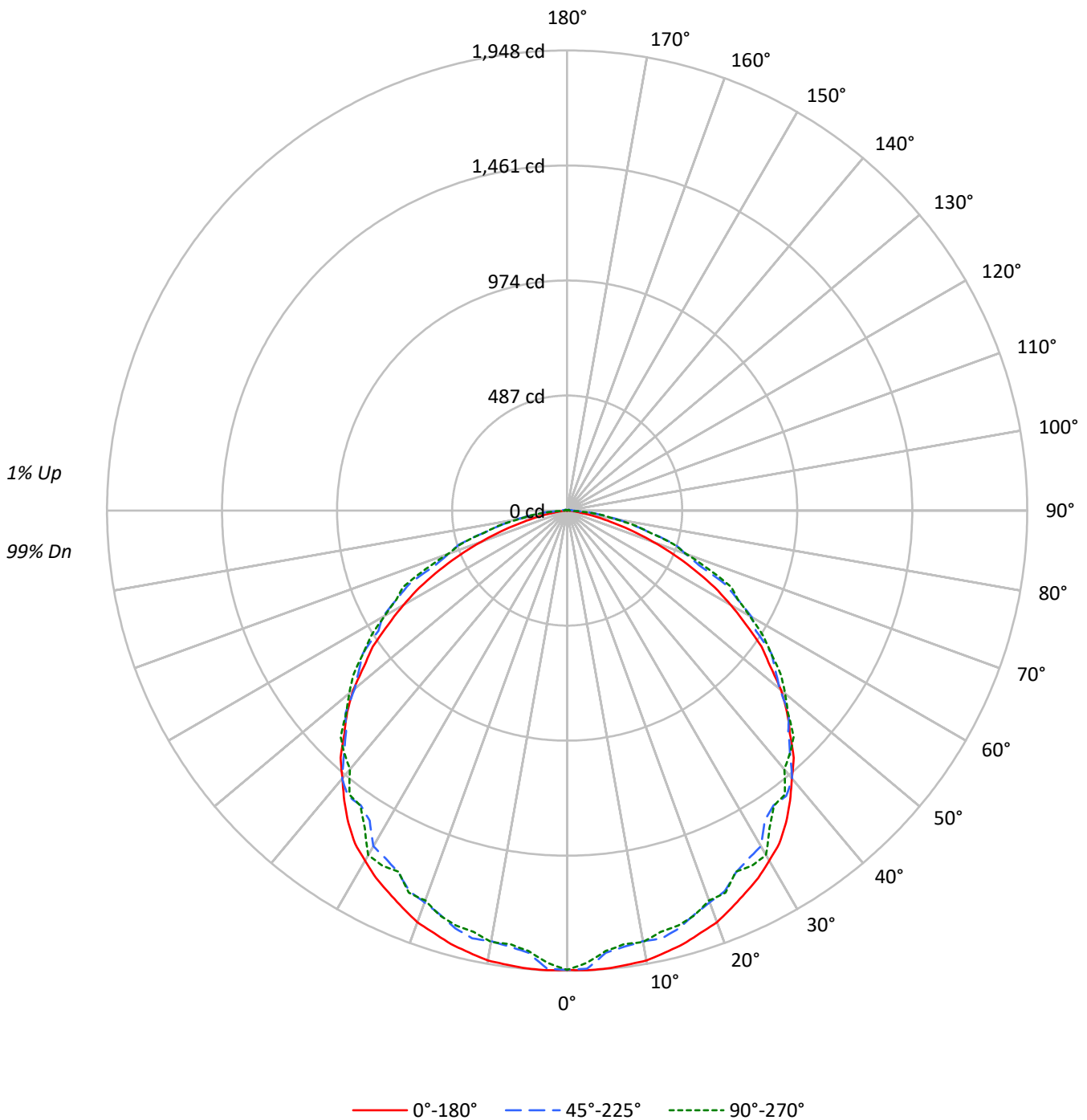
Lumens per Lamp: N/A
Luminaire Lumens: 5565.1 lumens
Efficiency: N/A
Efficacy: 126.8 lumens/watt
Spacing Criteria (0/90/45): 1.31 / 1.26 / 1.39
Luminous Opening: Rectangular (W 0.58' x L: 2' x H: 0')
CIE Type: Direct

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	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°	17938	17938	17938
5°	18023	17400	17336
10°	18118	17342	17374
15°	18142	17483	17368
20°	18208	17327	17243
25°	18176	17210	17176
30°	18231	17478	17937
35°	18187	17157	17176
40°	17827	17848	17224
45°	17399	17265	17693
50°	16961	16838	17283
55°	16150	16983	16956
60°	14771	16648	16458
65°	12994	16120	16760
70°	10518	14332	14427
75°	7318	13036	13036
80°	4123	11641	10998
85°	2011	10406	8405



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	180.5	3.2
10°-20°	516.8	9.3
20°-30°	791.7	14.2
30°-40°	972.0	17.5
40°-50°	1018.8	18.3
50°-60°	919.0	16.5
60°-70°	680.4	12.2
70°-80°	360.9	6.5
80°-90°	94.0	1.7
90°-100°	13.7	0.2
100°-110°	8.0	0.1
110°-120°	4.9	0.1
120°-130°	3.0	0.1
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°	1489.0	26.8
0°-40°	2460.9	44.2
0°-60°	4398.8	79.0
0°-90°	5534.1	99.4
90°-120°	26.5	0.5
90°-150°	30.9	0.6
90°-180°	31.0	0.6
0°-180°	5565.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1944	1944	1944	1944	1944	
5°	1946	1939	1879	1854	1872	185
15°	1899	1825	1830	1808	1818	536
25°	1786	1725	1691	1687	1687	824
35°	1615	1522	1523	1561	1525	1007
45°	1334	1296	1323	1332	1356	1032
55°	1004	1009	1056	1075	1054	888
65°	595	626	738	712	768	589
75°	205	305	366	392	366	228
85°	19	74	98	97	79	28
90°	0	22	22	17	10	1
95°	0	14	17	14	9	0
105°	0	5	10	10	7	1
115°	2	4	7	7	5	2
125°	2	2	4	5	4	2
135°	2	2	4	4	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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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1944.2	1944.2	1944.2	1944.2	1944.2
2.5°	1947.7	1944.2	1940.8	1927.0	1916.6
5°	1946.0	1939.1	1878.7	1854.5	1871.8
7.5°	1939.1	1911.5	1861.4	1852.8	1851.1
10°	1933.9	1866.6	1851.1	1863.2	1854.5
12.5°	1916.6	1839.0	1854.5	1840.7	1826.9
15°	1899.4	1825.2	1830.4	1807.9	1818.3
17.5°	1875.2	1797.6	1792.4	1811.4	1795.9
20°	1854.5	1764.8	1764.8	1754.5	1756.2
22.5°	1820.0	1754.5	1744.1	1751.0	1751.0
25°	1785.5	1725.1	1690.6	1687.2	1687.2
27.5°	1752.7	1671.7	1661.3	1644.1	1694.1
30°	1711.3	1618.2	1640.6	1664.8	1683.7
32.5°	1671.7	1566.4	1556.1	1647.5	1594.0
35°	1614.7	1521.6	1523.3	1561.3	1525.0
37.5°	1549.2	1481.9	1523.3	1488.8	1514.7
40°	1480.2	1409.4	1481.9	1457.7	1430.1
42.5°	1419.8	1333.5	1397.4	1378.4	1395.6
45°	1333.5	1295.6	1323.2	1331.8	1356.0
47.5°	1262.8	1216.2	1273.2	1299.0	1268.0
50°	1181.7	1112.7	1173.1	1197.2	1204.1
52.5°	1083.4	1050.6	1111.0	1148.9	1140.3
55°	1004.0	1009.2	1055.8	1074.8	1054.1
57.5°	897.1	929.9	947.1	966.1	981.6
60°	800.5	810.8	902.2	891.9	891.9
62.5°	703.9	733.2	812.5	822.9	814.3
65°	595.2	626.2	738.4	712.5	767.7
67.5°	491.7	534.8	603.8	676.3	648.7
70°	389.9	460.6	531.3	560.7	534.8
72.5°	293.3	376.1	481.3	464.1	472.7
75°	205.3	305.4	365.7	391.6	365.7
77.5°	132.8	226.0	288.1	308.8	296.7
80°	77.6	170.8	219.1	227.7	207.0
82.5°	41.4	115.6	151.8	153.5	151.8
85°	19.0	74.2	98.3	96.6	79.4
87.5°	8.6	44.9	41.4	31.1	22.4
90°	0.0	22.4	22.4	17.3	10.4
92.5°	0.0	17.3	19.0	15.5	8.6
95°	0.0	13.8	17.3	13.8	8.6
97.5°	0.0	10.4	15.5	12.1	8.6
100°	0.0	8.6	13.8	12.1	6.9
102.5°	0.0	6.9	12.1	10.4	6.9
105°	0.0	5.2	10.4	10.4	6.9
107.5°	1.7	3.5	10.4	8.6	6.9
110°	1.7	3.5	8.6	8.6	5.2



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	1.7	3.5	6.9	6.9	5.2
115°	1.7	3.5	6.9	6.9	5.2
117.5°	1.7	1.7	5.2	6.9	5.2
120°	1.7	1.7	5.2	5.2	5.2
122.5°	1.7	1.7	3.5	5.2	5.2
125°	1.7	1.7	3.5	5.2	3.5
127.5°	1.7	1.7	3.5	5.2	3.5
130°	1.7	1.7	3.5	3.5	3.5
132.5°	1.7	1.7	3.5	3.5	3.5
135°	1.7	1.7	3.5	3.5	3.5
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)