

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: P239245

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

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P239245
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-30-EDC-1
Description: FAILSAFE HDF LED FIXTURE
2FT, 2-ROW LED BOARDS, NON-OVERLAY
Light Source: (84) 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

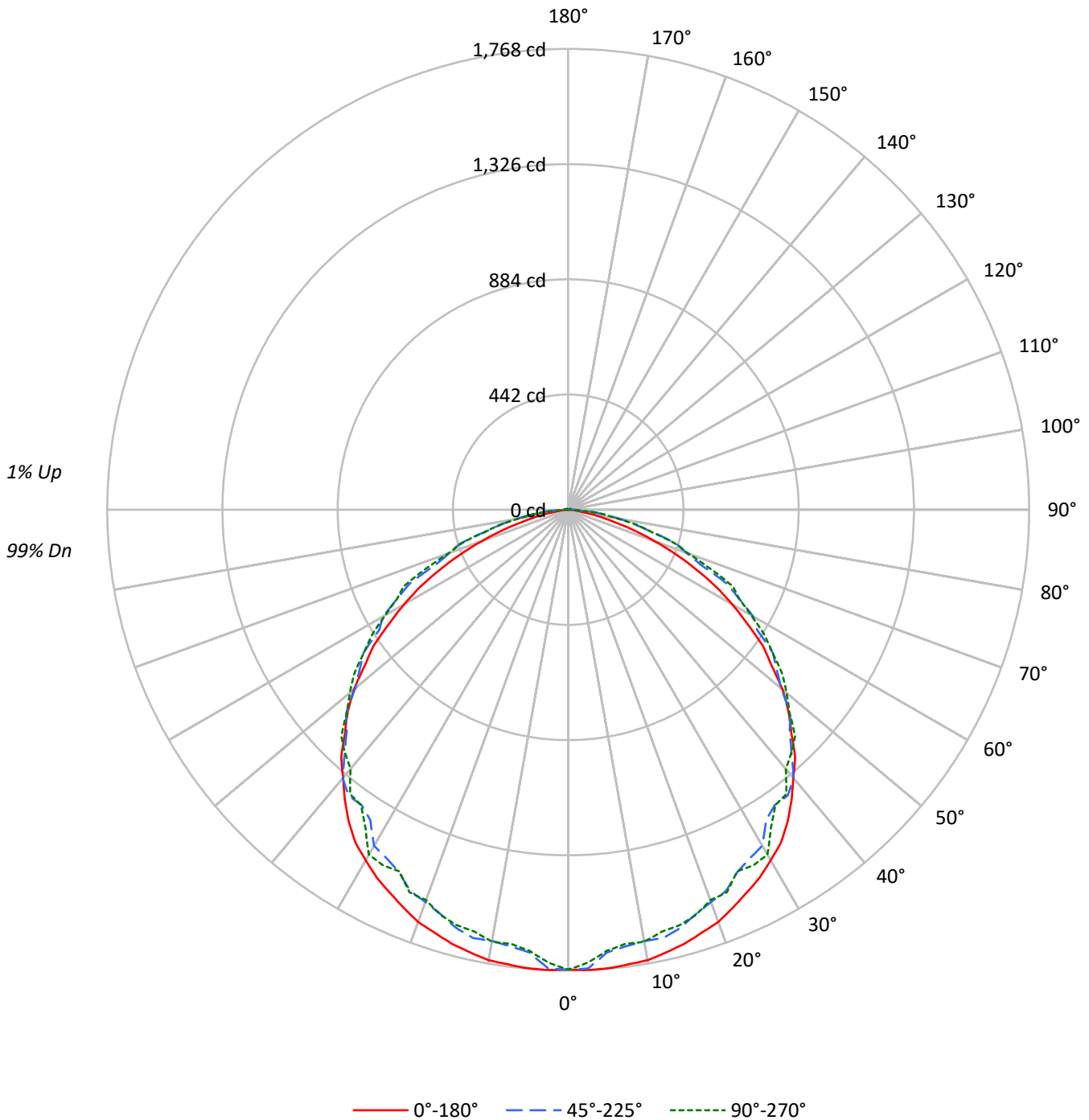
Lumens per Lamp: N/A
Luminaire Lumens: 5050.5 lumens
Efficiency: N/A
Efficacy: 115.0 lumens/watt
Spacing Criteria (0/90/45): 1.31 / 1.26 / 1.39
Luminous Opening: Rectangular (W 0.58' x L: 2' x H: 0')
CIE Type: Direct

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°	16280	16280	16280
5°	16357	15791	15732
10°	16443	15738	15768
15°	16465	15867	15762
20°	16525	15726	15648
25°	16496	15619	15588
30°	16546	15862	16280
35°	16505	15571	15588
40°	16179	16198	15632
45°	15790	15669	16057
50°	15394	15281	15685
55°	14657	15413	15387
60°	13406	15109	14935
65°	11791	14629	15210
70°	9544	13008	13094
75°	6641	11831	11831
80°	3746	10563	9983
85°	1821	9443	7622



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	163.8	3.2
10°-20°	469.1	9.3
20°-30°	718.5	14.2
30°-40°	882.1	17.5
40°-50°	924.6	18.3
50°-60°	834.0	16.5
60°-70°	617.5	12.2
70°-80°	327.6	6.5
80°-90°	85.3	1.7
90°-100°	12.4	0.2
100°-110°	7.2	0.1
110°-120°	4.4	0.1
120°-130°	2.7	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°	1351.3	26.8
0°-40°	2233.4	44.2
0°-60°	3992.1	79.0
0°-90°	5022.5	99.4
90°-120°	24.1	0.5
90°-150°	28.0	0.6
90°-180°	28.0	0.6
0°-180°	5050.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1764	1764	1764	1764	1764	
5°	1766	1760	1705	1683	1699	168
15°	1724	1656	1661	1641	1650	487
25°	1620	1566	1534	1531	1531	748
35°	1465	1381	1382	1417	1384	914
45°	1210	1176	1201	1209	1231	937
55°	911	916	958	975	957	806
65°	540	568	670	647	697	535
75°	186	277	332	355	332	207
85°	17	67	89	88	72	26
90°	0	20	20	16	9	1
95°	0	12	16	12	8	0
105°	0	5	9	9	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°	1764.5	1764.5	1764.5	1764.5	1764.5
2.5°	1767.6	1764.5	1761.4	1748.8	1739.4
5°	1766.1	1759.8	1705.0	1683.1	1698.7
7.5°	1759.8	1734.7	1689.3	1681.5	1679.9
10°	1755.1	1694.0	1679.9	1690.9	1683.1
12.5°	1739.4	1669.0	1683.1	1670.5	1658.0
15°	1723.8	1656.5	1661.2	1640.8	1650.2
17.5°	1701.9	1631.4	1626.7	1643.9	1629.8
20°	1683.1	1601.7	1601.7	1592.3	1593.8
22.5°	1651.8	1592.3	1582.9	1589.1	1589.1
25°	1620.4	1565.6	1534.3	1531.2	1531.2
27.5°	1590.7	1517.1	1507.7	1492.1	1537.5
30°	1553.1	1468.6	1488.9	1510.9	1528.1
32.5°	1517.1	1421.6	1412.2	1495.2	1446.7
35°	1465.4	1380.9	1382.5	1416.9	1384.0
37.5°	1406.0	1344.9	1382.5	1351.2	1374.6
40°	1343.3	1279.1	1344.9	1323.0	1297.9
42.5°	1288.5	1210.2	1268.2	1251.0	1266.6
45°	1210.2	1175.8	1200.9	1208.7	1230.6
47.5°	1146.1	1103.8	1155.4	1178.9	1150.8
50°	1072.5	1009.8	1064.6	1086.6	1092.8
52.5°	983.2	953.5	1008.3	1042.7	1034.9
55°	911.2	915.9	958.2	975.4	956.6
57.5°	814.1	843.9	859.5	876.8	890.9
60°	726.5	735.9	818.8	809.4	809.4
62.5°	638.8	665.4	737.4	746.8	739.0
65°	540.1	568.3	670.1	646.6	696.7
67.5°	446.2	485.4	548.0	613.7	588.7
70°	353.8	418.0	482.2	508.8	485.4
72.5°	266.2	341.3	436.8	421.2	429.0
75°	186.3	277.1	331.9	355.4	331.9
77.5°	120.6	205.1	261.5	280.3	269.3
80°	70.5	155.0	198.8	206.7	187.9
82.5°	37.6	104.9	137.8	139.3	137.8
85°	17.2	67.3	89.2	87.7	72.0
87.5°	7.8	40.7	37.6	28.2	20.4
90°	0.0	20.4	20.4	15.7	9.4
92.5°	0.0	15.7	17.2	14.1	7.8
95°	0.0	12.5	15.7	12.5	7.8
97.5°	0.0	9.4	14.1	11.0	7.8
100°	0.0	7.8	12.5	11.0	6.3
102.5°	0.0	6.3	11.0	9.4	6.3
105°	0.0	4.7	9.4	9.4	6.3
107.5°	1.6	3.1	9.4	7.8	6.3
110°	1.6	3.1	7.8	7.8	4.7



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	1.6	3.1	6.3	6.3	4.7
115°	1.6	3.1	6.3	6.3	4.7
117.5°	1.6	1.6	4.7	6.3	4.7
120°	1.6	1.6	4.7	4.7	4.7
122.5°	1.6	1.6	3.1	4.7	4.7
125°	1.6	1.6	3.1	4.7	3.1
127.5°	1.6	1.6	3.1	4.7	3.1
130°	1.6	1.6	3.1	3.1	3.1
132.5°	1.6	1.6	3.1	3.1	3.1
135°	1.6	1.6	3.1	3.1	3.1
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)