

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: P239213

Luminaire Tested: **HDF-4-LD4-UNV-1-STD-30-EDC-1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P239213
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1711-412-8)
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-1-STD-30-EDC-1
Description: FAILSAFE HDF LED FIXTURE
4FT, 1-ROW LED BOARDS, NON-OVERLAY
Light Source: (84) 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

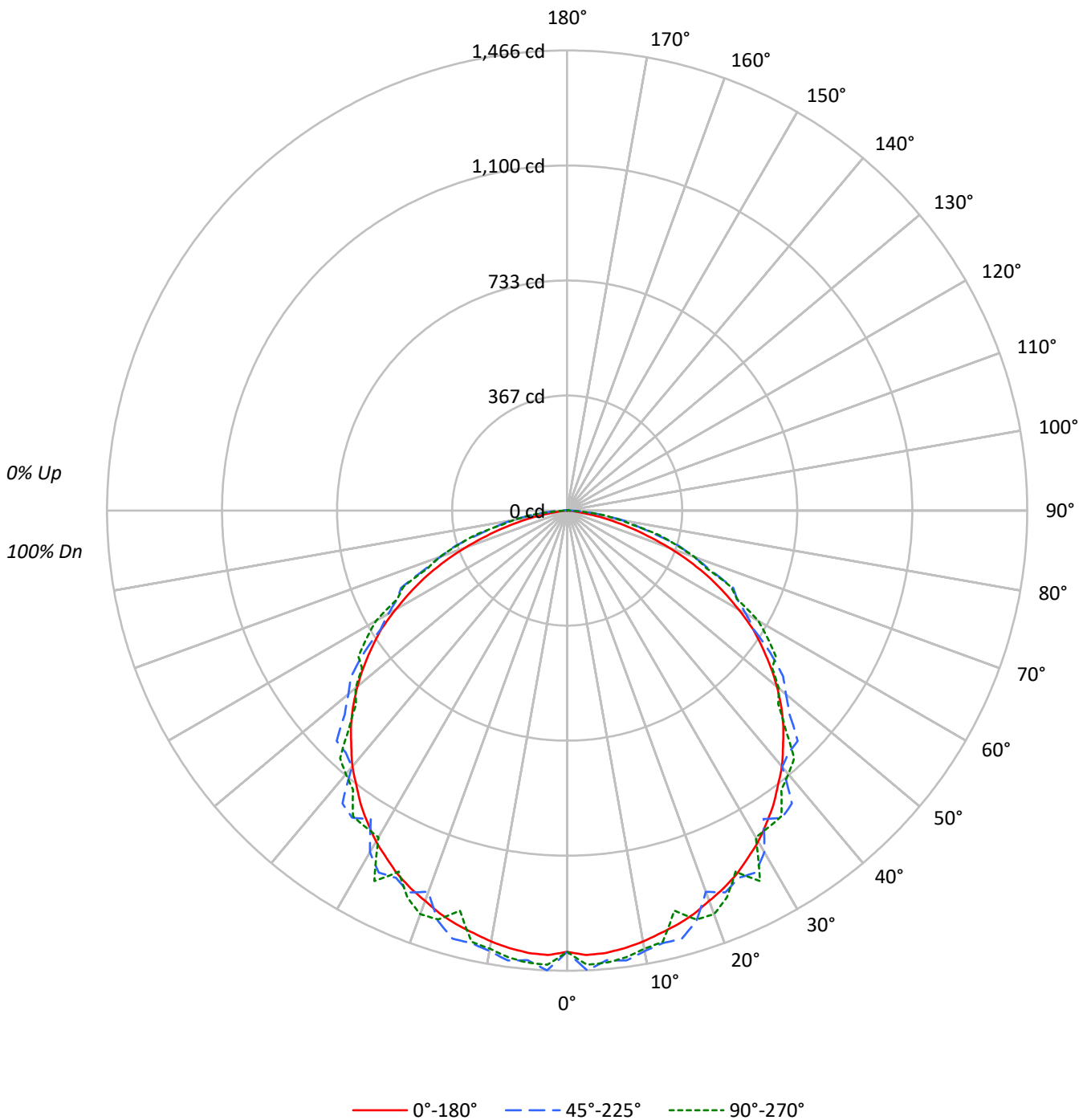
Lumens per Lamp: N/A
Luminaire Lumens: 4228.1 lumens
Efficiency: N/A
Efficacy: 125.5 lumens/watt
Spacing Criteria (0/90/45): 1.28 / 1.3 / 1.44
Luminous Opening: Rectangular (W 0.58' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 33.7
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	94	97	94	91	93	91	88	90	87	86	83
2	99	90	83	78	96	88	82	77	85	79	75	81	77	73	78	75	71	69
3	90	79	71	64	87	78	70	64	75	68	63	72	66	61	69	64	60	58
4	82	70	61	54	80	69	60	54	66	59	53	64	57	52	61	56	52	49
5	75	62	53	47	73	61	53	46	59	52	46	57	50	45	55	49	45	43
6	70	56	47	41	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	42	34	29	55	42	34	29	41	33	28	40	33	28	39	32	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	25	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6485	6485	6485
5°	6551	6659	6695
10°	6530	6675	6639
15°	6517	6744	6301
20°	6496	6344	6718
25°	6506	6571	6460
30°	6486	6692	6403
35°	6451	6726	6698
40°	6409	6417	6603
45°	6355	6775	6414
50°	6260	6529	6316
55°	6104	6352	6528
60°	5825	6063	6491
65°	5401	6371	6286
70°	4675	5770	5821
75°	3606	5144	5467
80°	2192	4862	4519
85°	1022	3615	3340



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	136.6	3.2
10°-20°	390.0	9.2
20°-30°	598.6	14.2
30°-40°	724.5	17.1
40°-50°	768.2	18.2
50°-60°	698.3	16.5
60°-70°	537.9	12.7
70°-80°	289.0	6.8
80°-90°	71.1	1.7
90°-100°	6.0	0.1
100°-110°	3.5	0.1
110°-120°	2.2	0.1
120°-130°	1.3	0.0
130°-140°	0.6	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°	1125.3	26.6
0°-40°	1849.7	43.7
0°-60°	3316.2	78.4
0°-90°	4214.3	99.7
90°-120°	11.7	0.3
90°-150°	13.7	0.3
90°-180°	14.0	0.3
0°-180°	4228.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1406	1406	1406	1406	1406	
5°	1415	1460	1438	1442	1446	134
15°	1364	1398	1412	1332	1319	385
25°	1278	1303	1291	1263	1269	589
35°	1146	1099	1194	1152	1189	716
45°	974	1022	1038	1023	983	750
55°	759	798	790	768	812	677
65°	495	513	584	567	576	487
75°	202	249	289	300	307	217
85°	19	59	68	63	63	29
90°	0	12	10	8	6	1
95°	0	6	6	5	5	0
105°	0	3	4	4	4	0
115°	1	1	3	3	3	1
125°	1	1	1	1	1	1
135°	1	1	1	1	1	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°	1405.7	1405.7	1405.7	1405.7	1405.7
2.5°	1417.3	1432.8	1466.3	1458.6	1448.2
5°	1414.7	1459.8	1437.9	1441.8	1445.7
7.5°	1405.7	1417.3	1445.7	1431.5	1435.4
10°	1394.1	1417.3	1425.0	1419.9	1417.3
12.5°	1378.7	1412.2	1410.9	1432.8	1407.0
15°	1364.5	1398.0	1412.2	1332.3	1319.4
17.5°	1346.5	1374.8	1369.6	1349.0	1365.8
20°	1323.3	1361.9	1292.3	1340.0	1368.4
22.5°	1302.6	1328.4	1316.8	1341.3	1332.3
25°	1278.2	1302.6	1291.0	1262.7	1269.1
27.5°	1247.2	1289.8	1300.1	1252.4	1331.0
30°	1217.6	1234.4	1256.3	1296.2	1202.1
32.5°	1181.5	1159.6	1164.8	1166.1	1195.7
35°	1145.5	1099.1	1194.4	1151.9	1189.3
37.5°	1102.9	1100.4	1176.4	1157.0	1121.0
40°	1064.3	1087.5	1065.6	1078.5	1096.5
42.5°	1017.9	1050.1	1045.0	1045.0	1070.7
45°	974.1	1021.8	1038.5	1023.0	983.1
47.5°	925.1	941.9	961.2	944.4	912.2
50°	872.3	846.5	909.7	860.7	880.0
52.5°	816.9	865.9	867.1	819.5	823.3
55°	758.9	797.6	789.8	767.9	811.7
57.5°	700.9	697.1	704.8	761.5	757.6
60°	631.4	654.5	657.1	691.9	703.5
62.5°	563.1	614.6	610.7	641.7	609.4
65°	494.8	512.8	583.7	566.9	575.9
67.5°	421.3	454.8	490.9	499.9	480.6
70°	346.6	386.5	427.8	425.2	431.6
72.5°	269.3	300.2	371.1	340.2	363.3
75°	202.3	248.7	288.6	300.2	306.7
77.5°	137.9	197.1	226.8	238.4	216.5
80°	82.5	146.9	183.0	168.8	170.1
82.5°	42.5	87.6	116.0	110.8	122.4
85°	19.3	59.3	68.3	63.1	63.1
87.5°	6.4	27.1	28.3	20.6	18.0
90°	0.0	11.6	10.3	7.7	6.4
92.5°	0.0	7.7	7.7	6.4	5.2
95°	0.0	6.4	6.4	5.2	5.2
97.5°	0.0	5.2	6.4	5.2	3.9
100°	0.0	3.9	5.2	5.2	3.9
102.5°	0.0	2.6	5.2	5.2	3.9
105°	0.0	2.6	3.9	3.9	3.9
107.5°	0.0	2.6	3.9	3.9	3.9
110°	0.0	1.3	3.9	3.9	2.6



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	1.3	1.3	2.6	3.9	2.6
115°	1.3	1.3	2.6	2.6	2.6
117.5°	1.3	1.3	2.6	2.6	2.6
120°	1.3	1.3	1.3	2.6	2.6
122.5°	1.3	1.3	1.3	2.6	2.6
125°	1.3	1.3	1.3	1.3	1.3
127.5°	1.3	1.3	1.3	1.3	1.3
130°	1.3	1.3	1.3	1.3	1.3
132.5°	1.3	1.3	1.3	1.3	1.3
135°	1.3	1.3	1.3	1.3	1.3
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)