

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: P239228

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

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P239228
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1711-412-9)
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-50-IK12-EDC-1
Description: FAILSAFE HDF LED FIXTURE
4FT, 1-ROW LED BOARDS, CLEAR LENS
Light Source: (84) 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

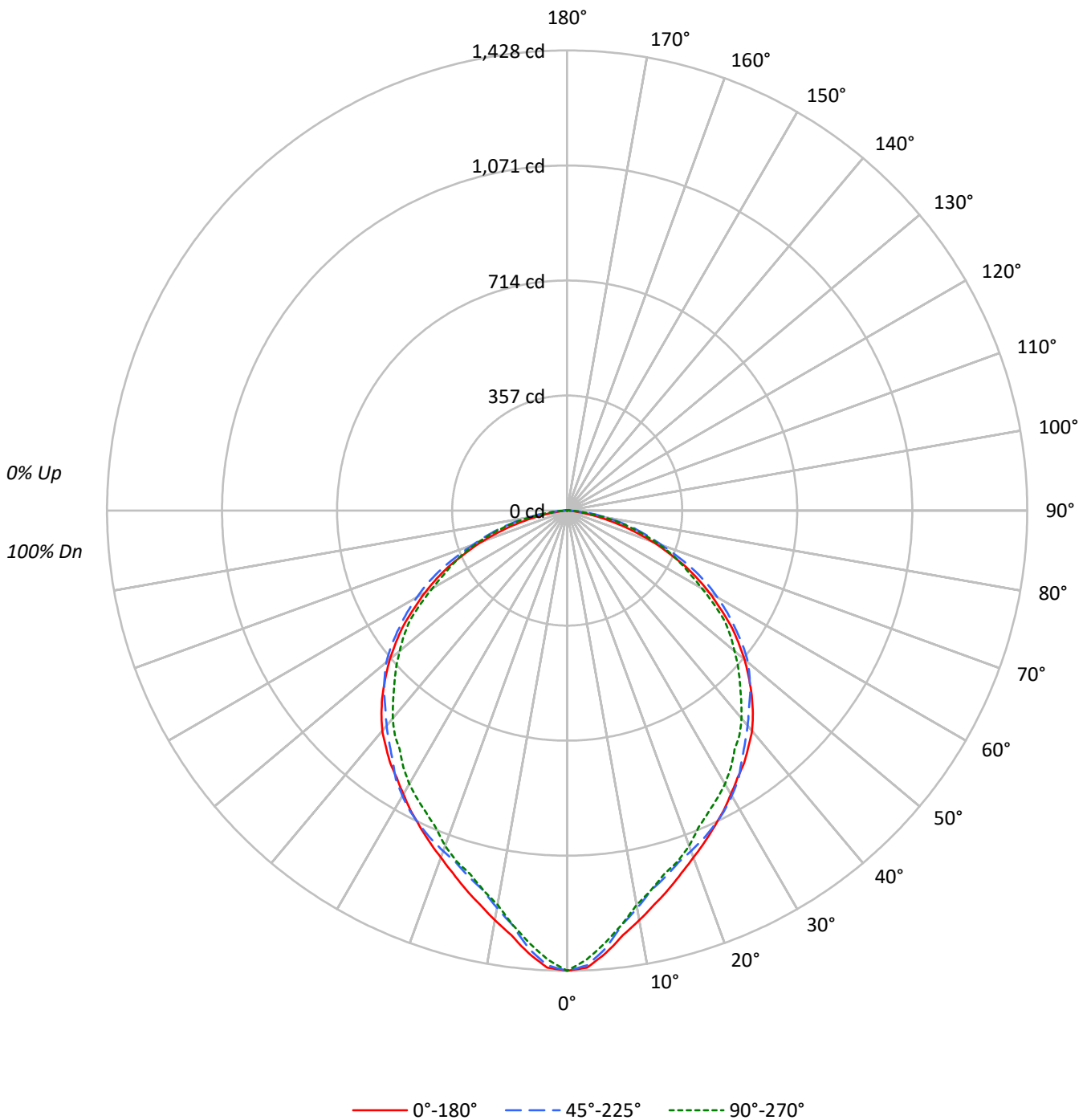
Lumens per Lamp: N/A
Luminaire Lumens: 3377.9 lumens
Efficiency: N/A
Efficacy: 100.2 lumens/watt
Spacing Criteria (0/90/45): 1.07 / 1.02 / 1.25
Luminous Opening: Rectangular (W 0.58' x L: 4' x H: 0')
CIE Type: Direct

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	95	98	94	92	94	91	89	90	88	86	84
2	99	91	84	79	96	89	83	78	85	80	76	82	78	74	79	75	72	70
3	90	80	72	66	88	78	71	65	75	69	64	73	67	63	70	65	61	59
4	83	71	62	56	81	70	61	55	67	60	54	65	59	54	62	57	53	51
5	76	63	55	48	74	62	54	48	60	53	47	58	52	47	56	51	46	44
6	70	57	48	42	68	56	48	42	54	47	41	53	46	41	51	45	40	38
7	65	52	43	37	64	51	43	37	49	42	37	48	41	36	47	41	36	34
8	61	47	39	33	59	47	39	33	45	38	33	44	37	32	43	37	32	30
9	57	43	35	30	55	43	35	30	42	35	30	41	34	29	40	34	29	27
10	53	40	32	27	52	40	32	27	39	32	27	38	31	27	37	31	27	25

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6588	6588	6588
5°	6383	6317	6238
10°	6044	5865	5818
15°	5810	5620	5573
20°	5624	5519	5435
25°	5506	5491	5267
30°	5414	5444	5218
35°	5388	5316	5101
40°	5377	5249	5069
45°	5288	5242	4945
50°	5155	5257	4869
55°	4978	5126	4795
60°	4702	4964	4453
65°	4354	4710	4261
70°	3791	4193	4040
75°	2961	3871	3643
80°	1886	3206	2941
85°	826	2255	2101



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	126.3	3.7
10°-20°	333.8	9.9
20°-30°	491.6	14.6
30°-40°	586.3	17.4
40°-50°	604.0	17.9
50°-60°	553.1	16.4
60°-70°	405.8	12.0
70°-80°	212.9	6.3
80°-90°	48.8	1.4
90°-100°	7.4	0.2
100°-110°	3.8	0.1
110°-120°	2.0	0.1
120°-130°	1.3	0.0
130°-140°	0.7	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°	951.7	28.2
0°-40°	1538.1	45.5
0°-60°	2695.2	79.8
0°-90°	3362.8	99.6
90°-120°	13.2	0.4
90°-150°	15.1	0.4
90°-180°	15.0	0.4
0°-180°	3377.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1428	1428	1428	1428	1428	
5°	1378	1364	1364	1350	1347	129
15°	1216	1192	1177	1168	1167	343
25°	1082	1070	1079	1050	1035	499
35°	957	945	944	924	906	598
45°	810	779	804	758	758	624
55°	619	625	637	620	596	551
65°	399	405	432	410	390	392
75°	166	190	217	213	204	179
85°	16	36	43	43	40	24
90°	0	10	10	8	7	1
95°	0	6	10	8	7	0
105°	0	1	4	6	6	0
115°	1	1	1	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°	1428.0	1428.0	1428.0	1428.0	1428.0
2.5°	1419.5	1409.6	1412.4	1402.5	1394.0
5°	1378.4	1364.2	1364.2	1350.0	1347.1
7.5°	1328.7	1303.1	1297.4	1294.6	1296.0
10°	1290.3	1256.3	1252.0	1235.0	1242.1
12.5°	1252.0	1225.1	1206.6	1191.0	1205.2
15°	1216.5	1192.4	1176.8	1168.3	1166.9
17.5°	1179.6	1159.8	1145.6	1145.6	1141.3
20°	1145.6	1127.1	1124.3	1118.6	1107.2
22.5°	1114.3	1095.9	1103.0	1087.4	1064.6
25°	1081.7	1070.3	1078.8	1050.4	1034.8
27.5°	1050.4	1047.6	1053.3	1020.6	1007.9
30°	1016.4	1017.8	1022.1	992.2	979.5
32.5°	983.7	985.2	989.4	962.4	945.4
35°	956.8	945.4	944.0	924.1	905.7
37.5°	924.1	904.2	907.1	882.9	878.7
40°	892.9	865.9	871.6	841.8	841.8
42.5°	853.1	819.1	834.7	803.5	799.2
45°	810.5	779.3	803.5	758.0	758.0
47.5°	763.7	738.2	768.0	721.1	719.7
50°	718.3	702.7	732.5	689.9	678.5
52.5°	668.6	667.2	687.1	650.1	638.8
55°	618.9	624.6	637.4	620.3	596.2
57.5°	562.1	577.7	589.1	577.7	539.4
60°	509.6	523.8	538.0	518.1	482.6
62.5°	455.7	465.6	488.3	464.2	433.0
65°	398.9	404.6	431.5	410.2	390.4
67.5°	336.4	344.9	369.1	363.4	347.8
70°	281.1	286.7	310.9	318.0	299.5
72.5°	222.9	237.1	262.6	259.8	252.7
75°	166.1	190.2	217.2	212.9	204.4
77.5°	115.0	142.0	167.5	164.7	160.4
80°	71.0	96.5	120.7	119.2	110.7
82.5°	35.5	62.5	80.9	76.7	69.6
85°	15.6	35.5	42.6	42.6	39.7
87.5°	4.3	17.0	21.3	18.5	17.0
90°	0.0	9.9	9.9	8.5	7.1
92.5°	0.0	8.5	9.9	8.5	7.1
95°	0.0	5.7	9.9	8.5	7.1
97.5°	0.0	4.3	8.5	8.5	7.1
100°	0.0	2.8	7.1	7.1	7.1
102.5°	0.0	2.8	5.7	5.7	5.7
105°	0.0	1.4	4.3	5.7	5.7
107.5°	0.0	1.4	2.8	4.3	4.3
110°	0.0	1.4	2.8	2.8	4.3



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.0	1.4	2.8	2.8	2.8
115°	1.4	1.4	1.4	2.8	2.8
117.5°	1.4	1.4	1.4	2.8	2.8
120°	1.4	1.4	1.4	1.4	2.8
122.5°	1.4	1.4	1.4	1.4	1.4
125°	1.4	1.4	1.4	1.4	1.4
127.5°	1.4	1.4	1.4	1.4	1.4
130°	1.4	1.4	1.4	1.4	1.4
132.5°	1.4	1.4	1.4	1.4	1.4
135°	1.4	1.4	1.4	1.4	1.4
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)