

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: P239249

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

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P239249
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-STD-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

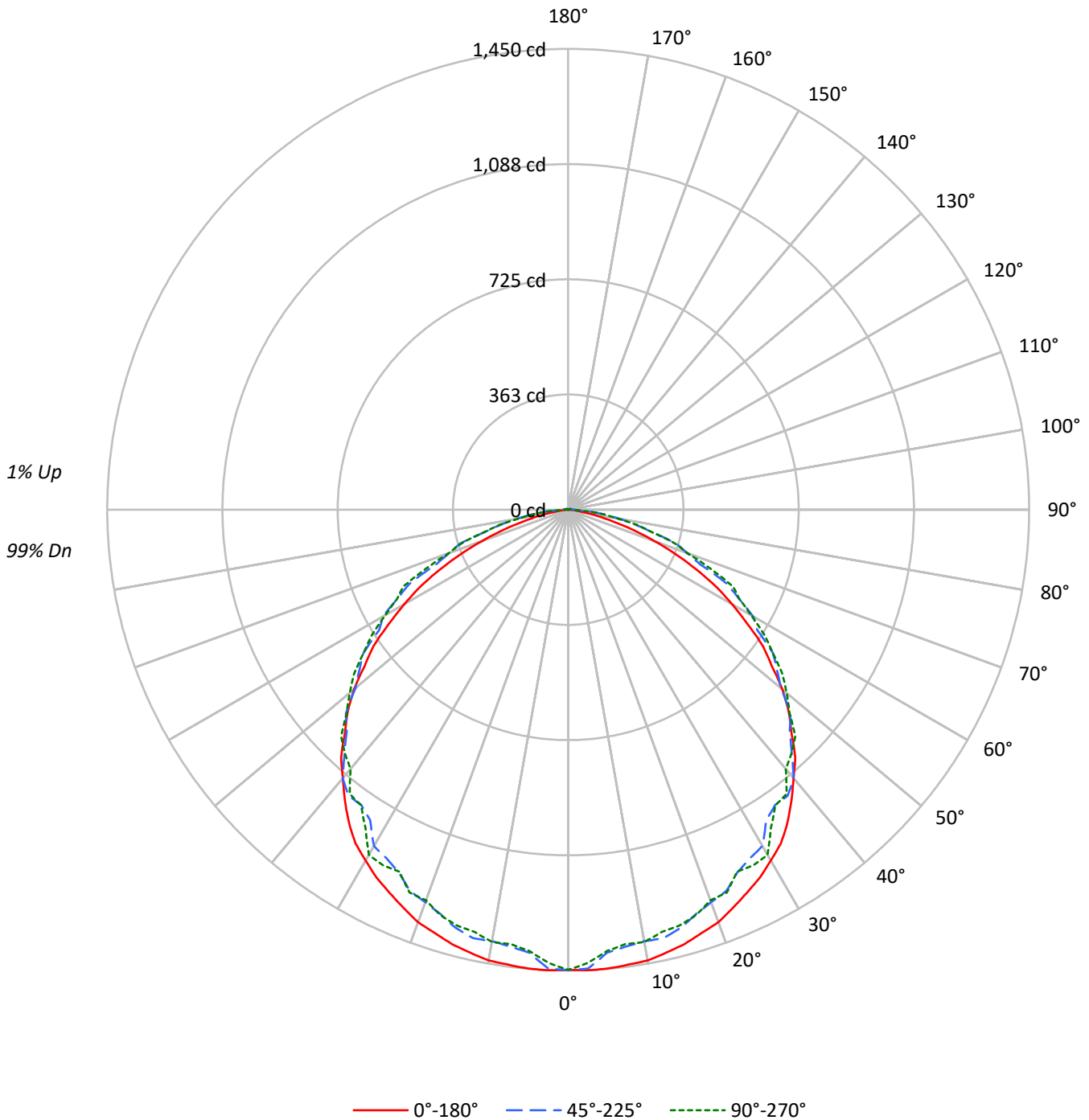
Lumens per Lamp: N/A
Luminaire Lumens: 4144.3 lumens
Efficiency: N/A
Efficacy: 124.8 lumens/watt
Spacing Criteria (0/90/45): 1.31 / 1.26 / 1.39
Luminous Opening: Rectangular (W 0.58' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 33.2
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°	13359	13359	13359
5°	13422	12958	12910
10°	13493	12915	12939
15°	13511	13020	12934
20°	13560	12904	12841
25°	13536	12817	12791
30°	13577	13016	13358
35°	13544	12777	12792
40°	13276	13292	12827
45°	12958	12857	13176
50°	12631	12539	12871
55°	12027	12648	12627
60°	10999	12398	12256
65°	9676	12005	12481
70°	7831	10674	10744
75°	5450	9710	9710
80°	3071	8671	8193
85°	1493	7749	6256



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	134.4	3.2
10°-20°	384.9	9.3
20°-30°	589.6	14.2
30°-40°	723.8	17.5
40°-50°	758.7	18.3
50°-60°	684.4	16.5
60°-70°	506.7	12.2
70°-80°	268.8	6.5
80°-90°	70.0	1.7
90°-100°	10.2	0.2
100°-110°	5.9	0.1
110°-120°	3.6	0.1
120°-130°	2.2	0.1
130°-140°	1.1	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°	1108.9	26.8
0°-40°	1832.7	44.2
0°-60°	3275.8	79.0
0°-90°	4121.3	99.4
90°-120°	19.7	0.5
90°-150°	23.0	0.6
90°-180°	23.0	0.6
0°-180°	4144.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1448	1448	1448	1448	1448	
5°	1449	1444	1399	1381	1394	138
15°	1414	1359	1363	1346	1354	399
25°	1330	1285	1259	1256	1256	614
35°	1202	1133	1134	1163	1136	750
45°	993	965	985	992	1010	769
55°	748	752	786	800	785	662
65°	443	466	550	531	572	439
75°	153	227	272	292	272	169
85°	14	55	73	72	59	21
90°	0	17	17	13	8	1
95°	0	10	13	10	6	0
105°	0	4	8	8	5	1
115°	1	3	5	5	4	1
125°	1	1	3	4	3	1
135°	1	1	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°	1447.9	1447.9	1447.9	1447.9	1447.9
2.5°	1450.5	1447.9	1445.3	1435.0	1427.3
5°	1449.2	1444.0	1399.1	1381.1	1393.9
7.5°	1444.0	1423.5	1386.2	1379.8	1378.5
10°	1440.2	1390.1	1378.5	1387.5	1381.1
12.5°	1427.3	1369.5	1381.1	1370.8	1360.5
15°	1414.5	1359.2	1363.1	1346.4	1354.1
17.5°	1396.5	1338.7	1334.8	1349.0	1337.4
20°	1381.1	1314.3	1314.3	1306.6	1307.9
22.5°	1355.4	1306.6	1298.9	1304.0	1304.0
25°	1329.7	1284.7	1259.0	1256.5	1256.5
27.5°	1305.3	1244.9	1237.2	1224.3	1261.6
30°	1274.4	1205.1	1221.8	1239.8	1253.9
32.5°	1244.9	1166.5	1158.8	1226.9	1187.1
35°	1202.5	1133.1	1134.4	1162.7	1135.7
37.5°	1153.7	1103.6	1134.4	1108.7	1128.0
40°	1102.3	1049.6	1103.6	1085.6	1065.0
42.5°	1057.3	993.1	1040.6	1026.5	1039.3
45°	993.1	964.8	985.4	991.8	1009.8
47.5°	940.4	905.7	948.1	967.4	944.3
50°	880.0	828.6	873.6	891.6	896.7
52.5°	806.8	782.4	827.4	855.6	849.2
55°	747.7	751.6	786.3	800.4	785.0
57.5°	668.1	692.5	705.3	719.4	731.0
60°	596.1	603.8	671.9	664.2	664.2
62.5°	524.2	546.0	605.1	612.8	606.4
65°	443.2	466.4	549.9	530.6	571.7
67.5°	366.1	398.3	449.7	503.6	483.1
70°	290.3	343.0	395.7	417.5	398.3
72.5°	218.4	280.1	358.4	345.6	352.0
75°	152.9	227.4	272.4	291.6	272.4
77.5°	98.9	168.3	214.5	230.0	221.0
80°	57.8	127.2	163.2	169.6	154.2
82.5°	30.8	86.1	113.1	114.3	113.1
85°	14.1	55.2	73.2	71.9	59.1
87.5°	6.4	33.4	30.8	23.1	16.7
90°	0.0	16.7	16.7	12.8	7.7
92.5°	0.0	12.8	14.1	11.6	6.4
95°	0.0	10.3	12.8	10.3	6.4
97.5°	0.0	7.7	11.6	9.0	6.4
100°	0.0	6.4	10.3	9.0	5.1
102.5°	0.0	5.1	9.0	7.7	5.1
105°	0.0	3.9	7.7	7.7	5.1
107.5°	1.3	2.6	7.7	6.4	5.1
110°	1.3	2.6	6.4	6.4	3.9



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	1.3	2.6	5.1	5.1	3.9
115°	1.3	2.6	5.1	5.1	3.9
117.5°	1.3	1.3	3.9	5.1	3.9
120°	1.3	1.3	3.9	3.9	3.9
122.5°	1.3	1.3	2.6	3.9	3.9
125°	1.3	1.3	2.6	3.9	2.6
127.5°	1.3	1.3	2.6	3.9	2.6
130°	1.3	1.3	2.6	2.6	2.6
132.5°	1.3	1.3	2.6	2.6	2.6
135°	1.3	1.3	2.6	2.6	2.6
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)