

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: P239259

Luminaire Tested: **HDF-2-LD4-UNV-2-HI-40-IK12-EDC-1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P239259
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1711-412-14)
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-40-IK12-EDC-1
Description: FAILSAFE HDF LED FIXTURE
2FT, 2-ROW LED BOARDS, CLEAR LENS
Light Source: (84) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

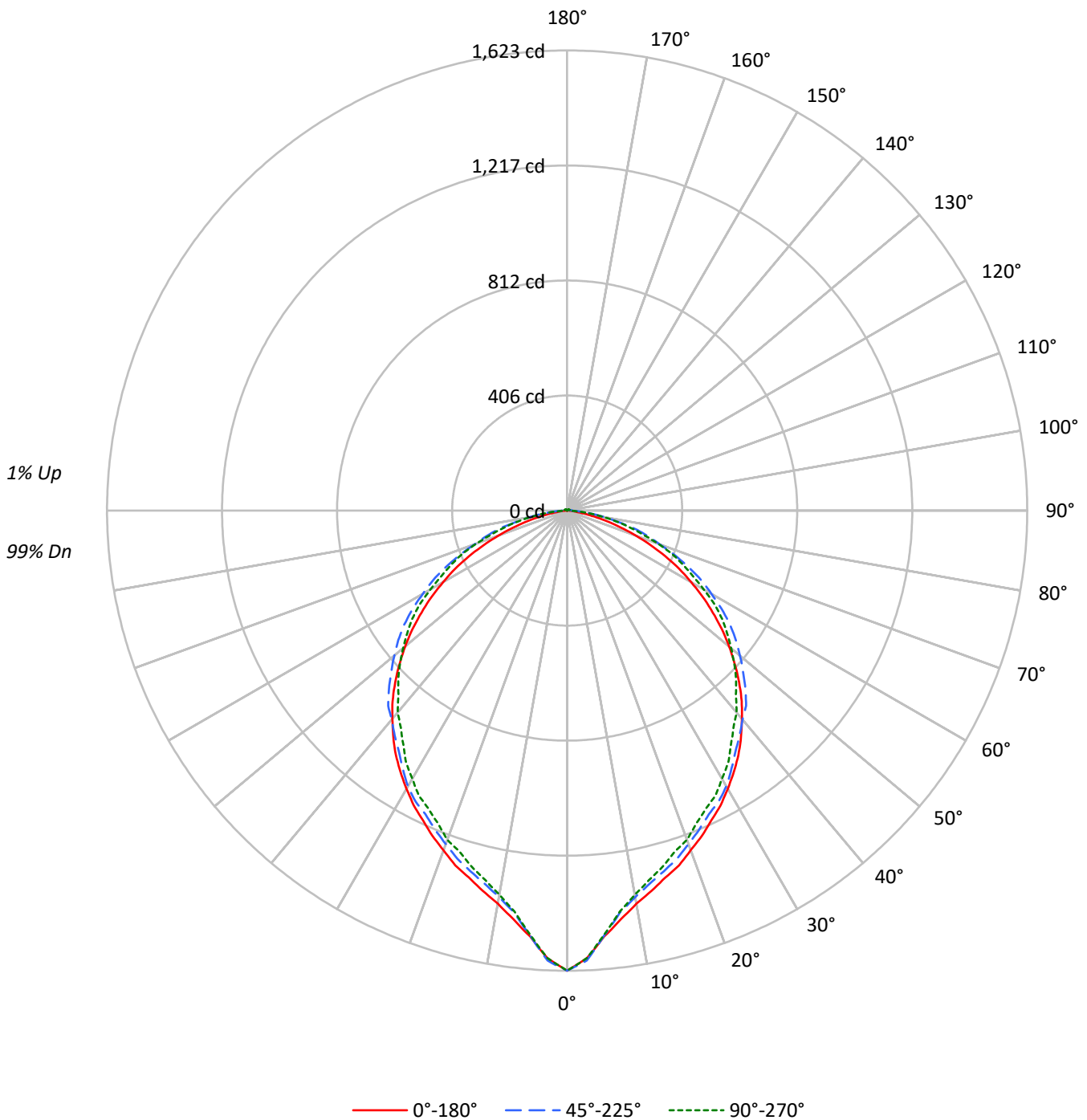
Lumens per Lamp: N/A
Luminaire Lumens: 3730.0 lumens
Efficiency: N/A
Efficacy: 85.0 lumens/watt
Spacing Criteria (0/90/45): 1.05 / 1.01 / 1.23
Luminous Opening: Rectangular (W 0.58' x L: 2' x H: 0')
CIE Type: Direct

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	101	101	101	99
1	109	104	100	96	106	102	98	95	98	94	92	94	91	89	90	88	86	84
2	99	91	84	79	97	89	83	78	85	80	76	82	78	74	79	75	72	70
3	91	80	72	66	88	78	71	65	75	69	64	73	67	63	70	65	61	59
4	83	71	62	56	81	70	62	55	67	60	55	65	59	54	62	57	53	51
5	76	64	55	48	74	62	54	48	60	53	47	58	52	47	56	51	46	44
6	71	57	48	42	69	56	48	42	54	47	41	53	46	41	51	45	41	39
7	65	52	43	37	64	51	43	37	50	42	37	48	41	36	47	41	36	34
8	61	48	39	33	59	47	39	33	45	38	33	44	37	33	43	37	32	30
9	57	44	35	30	56	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°	14972	14972	14972
5°	13959	13929	13899
10°	13191	12961	12886
15°	12795	12578	12422
20°	12513	12290	12130
25°	12262	12030	11798
30°	12069	11965	11636
35°	11861	11660	11348
40°	11547	11586	11194
45°	11192	11596	11001
50°	10700	11424	10841
55°	10081	11284	10735
60°	9311	10843	10272
65°	8350	10341	9844
70°	6981	9352	9177
75°	5222	8762	8181
80°	3114	7003	6833
85°	1546	5515	4647



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	139.9	3.8
10°-20°	372.8	10.0
20°-30°	546.1	14.6
30°-40°	648.3	17.4
40°-50°	669.6	18.0
50°-60°	601.7	16.1
60°-70°	439.4	11.8
70°-80°	230.5	6.2
80°-90°	55.0	1.5
90°-100°	11.1	0.3
100°-110°	7.0	0.2
110°-120°	4.2	0.1
120°-130°	3.0	0.1
130°-140°	1.5	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°	1058.7	28.4
0°-40°	1707.0	45.8
0°-60°	2978.3	79.8
0°-90°	3703.2	99.3
90°-120°	22.3	0.6
90°-150°	26.8	0.7
90°-180°	27.0	0.7
0°-180°	3730.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1623	1623	1623	1623	1623	
5°	1507	1510	1504	1493	1501	141
15°	1340	1338	1317	1317	1300	378
25°	1204	1190	1182	1175	1159	556
35°	1053	1048	1035	1025	1008	658
45°	858	874	889	861	843	661
55°	627	664	702	687	667	561
65°	382	420	474	464	451	378
75°	146	200	246	238	230	158
85°	15	37	52	49	44	21
90°	0	13	15	13	10	1
95°	0	8	15	13	10	0
105°	2	3	8	10	10	1
115°	2	2	5	5	6	2
125°	2	2	3	5	5	2
135°	3	2	3	3	5	2
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°	1622.8	1622.8	1622.8	1622.8	1622.8
2.5°	1580.5	1588.6	1588.6	1583.7	1580.5
5°	1507.2	1510.5	1504.0	1492.6	1500.7
7.5°	1453.5	1447.0	1429.1	1417.7	1425.9
10°	1408.0	1401.4	1383.5	1367.3	1375.4
12.5°	1373.8	1370.5	1347.7	1338.0	1334.7
15°	1339.6	1338.0	1316.8	1316.8	1300.5
17.5°	1311.9	1307.0	1287.5	1281.0	1261.5
20°	1274.5	1274.5	1251.7	1238.7	1235.4
22.5°	1241.9	1222.4	1217.5	1209.4	1193.1
25°	1204.5	1189.8	1181.7	1175.2	1158.9
27.5°	1171.9	1155.7	1157.3	1139.4	1132.9
30°	1132.9	1121.5	1123.1	1103.6	1092.2
32.5°	1093.8	1085.7	1079.2	1067.8	1056.4
35°	1053.1	1048.2	1035.2	1025.4	1007.5
37.5°	1007.5	1007.5	999.4	989.6	963.6
40°	958.7	958.7	962.0	940.8	929.4
42.5°	911.5	916.4	934.3	908.3	880.6
45°	857.8	874.1	888.7	861.1	843.1
47.5°	802.5	823.6	841.5	823.6	799.2
50°	745.5	778.0	795.9	776.4	755.3
52.5°	688.5	721.1	750.4	734.1	711.3
55°	626.7	664.1	701.5	686.9	667.4
57.5°	568.1	610.4	646.2	636.4	616.9
60°	504.6	548.5	587.6	579.5	556.7
62.5°	446.0	485.1	533.9	522.5	499.7
65°	382.5	419.9	473.7	463.9	450.9
67.5°	319.0	359.7	410.2	410.2	402.0
70°	258.8	304.4	346.7	358.1	340.2
72.5°	198.6	250.7	296.2	296.2	280.0
75°	146.5	200.2	245.8	237.6	229.5
77.5°	97.7	149.7	183.9	185.6	179.0
80°	58.6	102.5	131.8	136.7	128.6
82.5°	30.9	68.4	89.5	89.5	84.6
85°	14.6	37.4	52.1	48.8	43.9
87.5°	6.5	21.2	24.4	22.8	17.9
90°	0.0	13.0	14.6	13.0	9.8
92.5°	0.0	11.4	14.6	13.0	9.8
95°	0.0	8.1	14.6	13.0	9.8
97.5°	0.0	6.5	13.0	13.0	11.4
100°	0.0	4.9	11.4	11.4	11.4
102.5°	0.0	3.3	9.8	11.4	9.8
105°	1.6	3.3	8.1	9.8	9.8
107.5°	1.6	3.3	6.5	8.1	8.1
110°	1.6	3.3	4.9	6.5	8.1



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	1.6	3.3	4.9	6.5	6.5
115°	1.6	1.6	4.9	4.9	6.5
117.5°	1.6	3.3	4.9	4.9	6.5
120°	1.6	1.6	3.3	4.9	6.5
122.5°	1.6	1.6	3.3	4.9	6.5
125°	1.6	1.6	3.3	4.9	4.9
127.5°	3.3	1.6	3.3	4.9	4.9
130°	3.3	1.6	3.3	3.3	4.9
132.5°	3.3	1.6	3.3	3.3	4.9
135°	3.3	1.6	3.3	3.3	4.9
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)