

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: P239215

Luminaire Tested: **HDF-4-LD4-UNV-1-STD-40-EDC-1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P239215
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-40-EDC-1
Description: FAILSAFE HDF LED FIXTURE
4FT, 1-ROW LED BOARDS, NON-OVERLAY
Light Source: (84) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

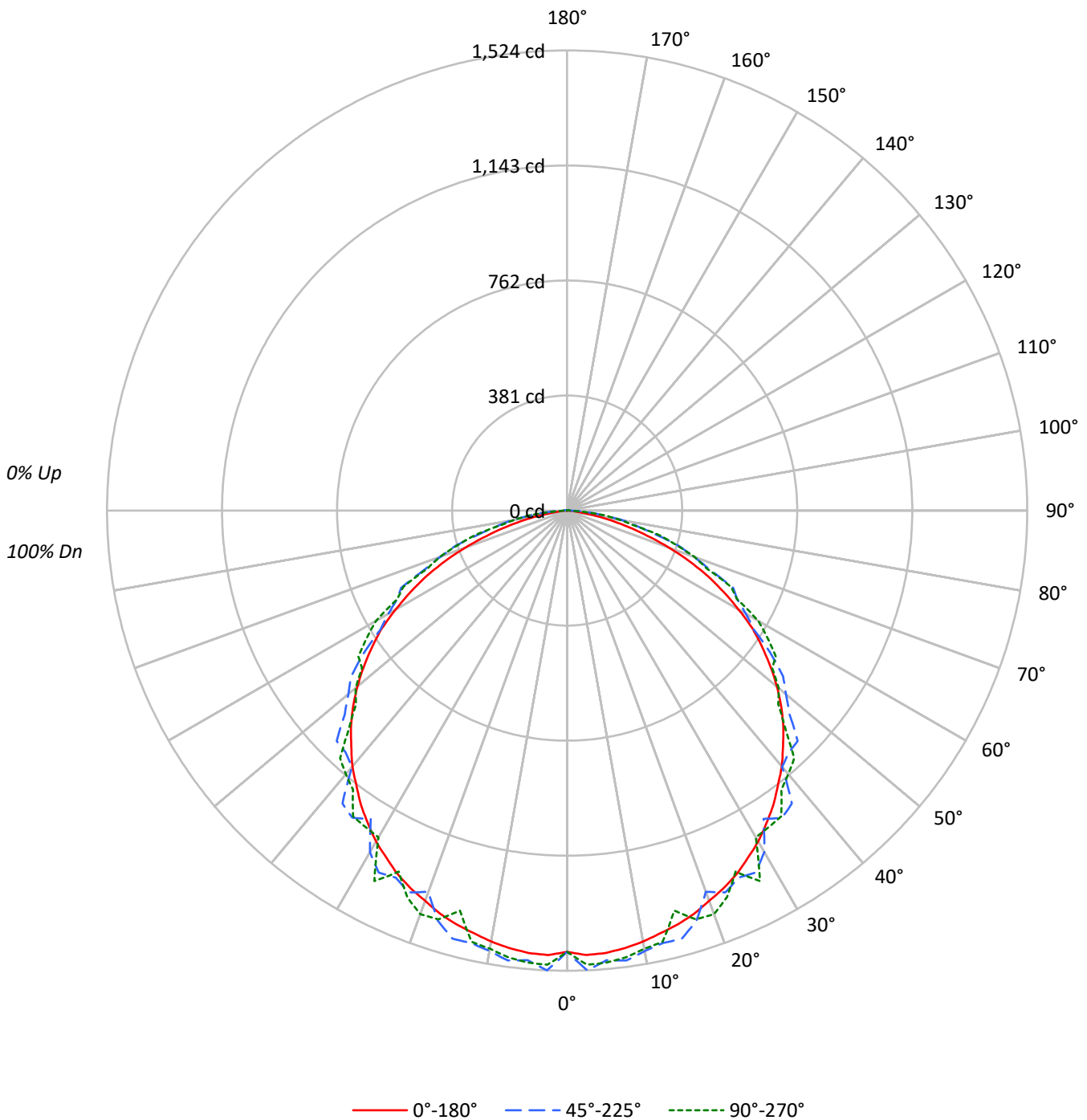
Lumens per Lamp: N/A
Luminaire Lumens: 4395.0 lumens
Efficiency: N/A
Efficacy: 130.4 lumens/watt
Spacing Criteria (0/90/45): 1.28 / 1.3 / 1.44
Luminous Opening: Rectangular (W 0.58' x L: 4' x H: 0')
CIE Type: Direct

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°	6741	6741	6741
5°	6810	6922	6959
10°	6788	6939	6901
15°	6774	7010	6550
20°	6753	6595	6983
25°	6763	6831	6715
30°	6742	6956	6656
35°	6706	6992	6962
40°	6662	6671	6864
45°	6606	7043	6667
50°	6508	6786	6565
55°	6345	6603	6786
60°	6055	6302	6747
65°	5614	6622	6535
70°	4860	5998	6052
75°	3748	5347	5682
80°	2277	5053	4697
85°	1064	3758	3472



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	142.0	3.2
10°-20°	405.4	9.2
20°-30°	622.3	14.2
30°-40°	753.1	17.1
40°-50°	798.5	18.2
50°-60°	725.9	16.5
60°-70°	559.2	12.7
70°-80°	300.5	6.8
80°-90°	73.9	1.7
90°-100°	6.3	0.1
100°-110°	3.6	0.1
110°-120°	2.3	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°	1169.7	26.6
0°-40°	1922.8	43.7
0°-60°	3447.2	78.4
0°-90°	4380.8	99.7
90°-120°	12.1	0.3
90°-150°	14.1	0.3
90°-180°	14.0	0.3
0°-180°	4395.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1461	1461	1461	1461	1461	
5°	1471	1518	1495	1499	1503	140
15°	1418	1453	1468	1385	1372	400
25°	1329	1354	1342	1313	1319	612
35°	1191	1142	1242	1197	1236	744
45°	1013	1062	1080	1064	1022	780
55°	789	829	821	798	844	704
65°	514	533	607	589	599	506
75°	210	258	300	312	319	225
85°	20	62	71	66	66	30
90°	0	12	11	8	7	1
95°	0	7	7	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°	1461.3	1461.3	1461.3	1461.3	1461.3
2.5°	1473.3	1489.4	1524.2	1516.2	1505.4
5°	1470.6	1517.5	1494.7	1498.8	1502.8
7.5°	1461.3	1473.3	1502.8	1488.0	1492.1
10°	1449.2	1473.3	1481.3	1476.0	1473.3
12.5°	1433.1	1467.9	1466.6	1489.4	1462.6
15°	1418.4	1453.2	1467.9	1384.9	1371.5
17.5°	1399.6	1429.1	1423.7	1402.3	1419.7
20°	1375.5	1415.7	1343.4	1392.9	1422.4
22.5°	1354.1	1380.9	1368.8	1394.3	1384.9
25°	1328.7	1354.1	1342.0	1312.6	1319.3
27.5°	1296.5	1340.7	1351.4	1301.9	1383.6
30°	1265.7	1283.1	1305.9	1347.4	1249.6
32.5°	1228.2	1205.4	1210.8	1212.1	1242.9
35°	1190.7	1142.5	1241.6	1197.4	1236.2
37.5°	1146.5	1143.8	1222.8	1202.8	1165.2
40°	1106.3	1130.4	1107.7	1121.1	1139.8
42.5°	1058.1	1091.6	1086.2	1086.2	1113.0
45°	1012.6	1062.1	1079.5	1063.5	1021.9
47.5°	961.7	979.1	999.2	981.8	948.3
50°	906.8	880.0	945.6	894.7	914.8
52.5°	849.2	900.1	901.4	851.8	855.9
55°	788.9	829.1	821.0	798.3	843.8
57.5°	728.6	724.6	732.6	791.6	787.5
60°	656.3	680.4	683.1	719.2	731.3
62.5°	585.3	638.9	634.9	667.0	633.5
65°	514.3	533.1	606.7	589.3	598.7
67.5°	438.0	472.8	510.3	519.7	499.6
70°	360.3	401.8	444.7	442.0	448.7
72.5°	279.9	312.1	385.7	353.6	377.7
75°	210.3	258.5	300.0	312.1	318.8
77.5°	143.3	204.9	235.7	247.8	225.0
80°	85.7	152.7	190.2	175.5	176.8
82.5°	44.2	91.1	120.5	115.2	127.2
85°	20.1	61.6	71.0	65.6	65.6
87.5°	6.7	28.1	29.5	21.4	18.8
90°	0.0	12.1	10.7	8.0	6.7
92.5°	0.0	8.0	8.0	6.7	5.4
95°	0.0	6.7	6.7	5.4	5.4
97.5°	0.0	5.4	6.7	5.4	4.0
100°	0.0	4.0	5.4	5.4	4.0
102.5°	0.0	2.7	5.4	5.4	4.0
105°	0.0	2.7	4.0	4.0	4.0
107.5°	0.0	2.7	4.0	4.0	4.0
110°	0.0	1.3	4.0	4.0	2.7



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CATALOG NUMBER: HDF-4-LD4-UNV-1-STD-40-EDC-1

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	1.3	1.3	2.7	4.0	2.7
115°	1.3	1.3	2.7	2.7	2.7
117.5°	1.3	1.3	2.7	2.7	2.7
120°	1.3	1.3	1.3	2.7	2.7
122.5°	1.3	1.3	1.3	2.7	2.7
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)