

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: P239305

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

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P239305
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1711-412-20)
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-1-HI-30-OPL-EDC-1
Description: FAILSAFE HDF LED FIXTURE
2FT, 1-ROW LED BOARDS, OPAL LENS
Light Source: (42) 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

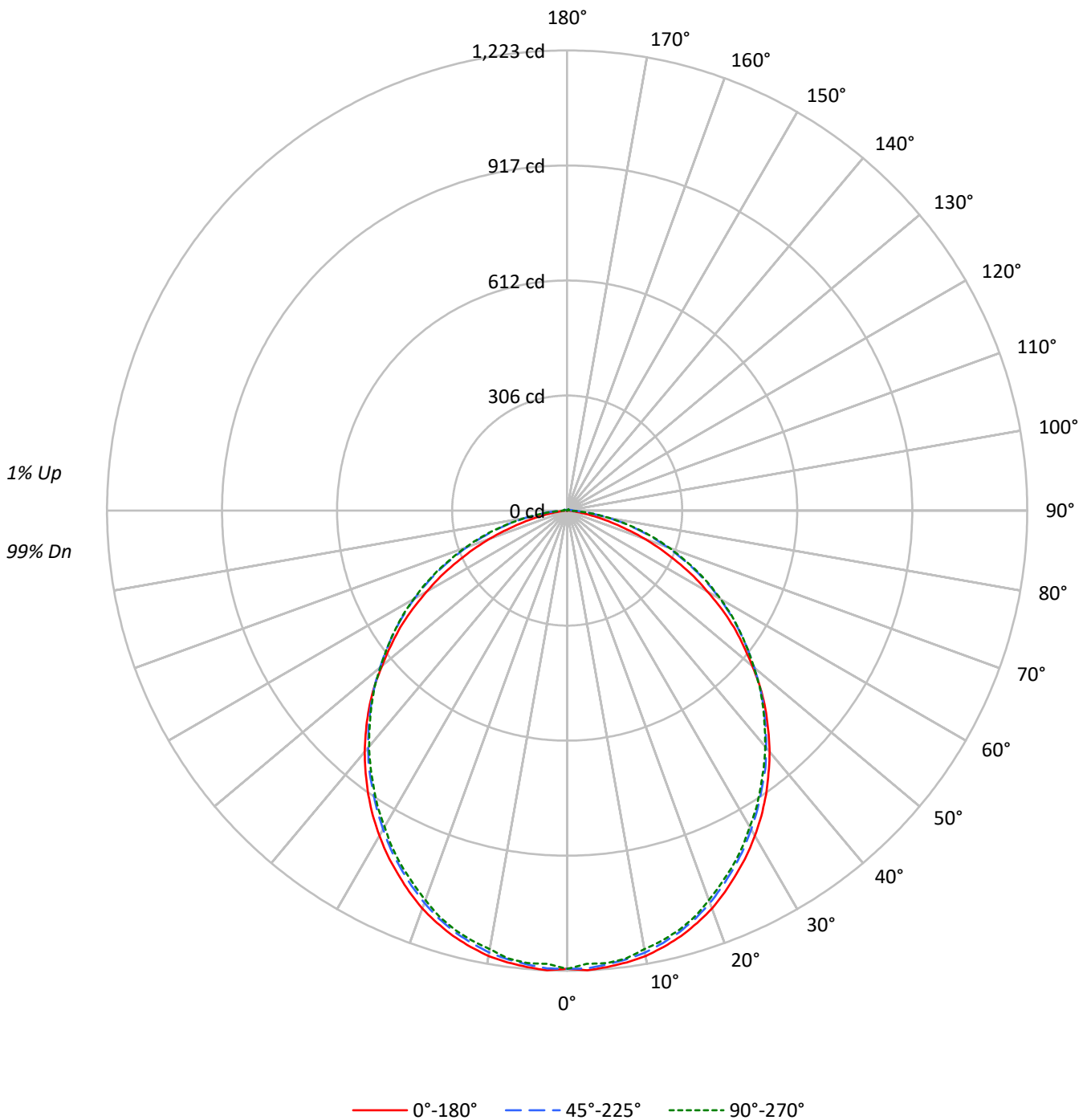
Lumens per Lamp: N/A
Luminaire Lumens: 3174.8 lumens
Efficiency: N/A
Efficacy: 66.6 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.19 / 1.31
Luminous Opening: Rectangular (W 0.58' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 47.7
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	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	97	106	102	98	95	98	95	92	94	91	89	90	88	86	84								
2	99	91	85	79	97	89	83	78	86	81	76	82	78	74	79	76	73	70								
3	91	80	73	66	88	79	71	66	76	69	64	73	68	63	70	66	62	60								
4	83	72	63	56	81	70	62	56	68	61	55	65	59	54	63	58	53	51								
5	77	64	55	49	75	63	55	48	61	53	48	59	52	47	57	51	47	45								
6	71	58	49	43	69	57	48	42	55	48	42	53	47	42	52	46	41	39								
7	66	52	44	38	64	52	43	38	50	43	37	49	42	37	47	41	37	35								
8	61	48	40	34	60	47	39	34	46	39	33	45	38	33	43	37	33	31								
9	57	44	36	30	56	43	36	30	42	35	30	41	35	30	40	34	30	28								
10	54	41	33	28	52	40	33	28	39	32	27	38	32	27	37	31	27	25								

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11236	11236	11236
5°	11279	11217	11180
10°	11261	11174	11088
15°	11179	11066	11015
20°	11052	10896	10819
25°	10842	10668	10600
30°	10631	10421	10337
35°	10379	10157	10097
40°	10084	9910	9863
45°	9722	9637	9602
50°	9221	9315	9297
55°	8704	9000	9021
60°	7944	8649	8697
65°	7041	8191	8307
70°	5894	7599	7777
75°	4317	6898	7087
80°	2518	5945	6084
85°	1249	5018	4742



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	115.1	3.6
10°-20°	326.7	10.3
20°-30°	483.6	15.2
30°-40°	566.1	17.8
40°-50°	569.0	17.9
50°-60°	494.7	15.6
60°-70°	359.1	11.3
70°-80°	190.3	6.0
80°-90°	49.3	1.6
90°-100°	9.1	0.3
100°-110°	5.6	0.2
110°-120°	3.0	0.1
120°-130°	2.1	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°	925.4	29.1
0°-40°	1491.5	47.0
0°-60°	2555.2	80.5
0°-90°	3153.9	99.3
90°-120°	17.7	0.6
90°-150°	20.9	0.7
90°-180°	21.0	0.7
0°-180°	3174.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1218	1218	1218	1218	1218	
5°	1218	1216	1211	1206	1207	116
15°	1170	1165	1158	1155	1153	330
25°	1065	1057	1048	1043	1041	491
35°	922	910	902	898	896	576
45°	745	736	739	737	736	573
55°	541	541	560	564	561	482
65°	322	341	375	383	380	320
75°	121	159	194	201	199	132
85°	12	37	47	47	45	17
90°	0	12	13	12	8	1
95°	0	8	12	10	8	0
105°	0	3	7	8	7	1
115°	1	1	4	4	4	1
125°	1	1	3	3	4	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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CATALOG NUMBER: HDF-2-LD4-UNV-1-HI-30-OPL-EDC-1

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1217.8	1217.8	1217.8	1217.8	1217.8
2.5°	1223.0	1221.7	1217.8	1209.9	1205.9
5°	1217.8	1216.4	1211.2	1205.9	1207.2
7.5°	1211.2	1208.5	1203.3	1199.3	1200.6
10°	1202.0	1198.0	1192.7	1186.2	1183.5
12.5°	1187.5	1184.8	1176.9	1170.4	1170.4
15°	1170.4	1165.1	1158.5	1154.6	1153.2
17.5°	1149.3	1142.7	1136.1	1130.9	1130.9
20°	1125.6	1117.7	1109.8	1103.2	1101.9
22.5°	1096.6	1088.7	1079.5	1072.9	1071.6
25°	1065.0	1057.1	1047.9	1042.7	1041.3
27.5°	1033.4	1022.9	1015.0	1008.4	1008.4
30°	997.9	987.4	978.2	972.9	970.3
32.5°	961.0	949.2	941.3	936.0	936.0
35°	921.5	909.7	901.8	897.8	896.5
37.5°	879.4	868.9	864.9	861.0	858.4
40°	837.3	826.8	822.8	820.2	818.9
42.5°	791.2	782.0	780.7	778.0	776.7
45°	745.1	735.9	738.6	737.2	735.9
47.5°	696.4	689.8	695.1	695.1	693.8
50°	642.4	639.8	649.0	651.7	647.7
52.5°	591.1	589.8	604.3	606.9	604.3
55°	541.1	541.1	559.5	563.5	560.8
57.5°	487.1	491.1	514.7	520.0	517.4
60°	430.5	441.0	468.7	473.9	471.3
62.5°	379.1	391.0	422.6	430.5	426.5
65°	322.5	341.0	375.2	383.1	380.5
67.5°	269.9	292.3	327.8	337.0	333.1
70°	218.5	244.9	281.7	289.6	288.3
72.5°	167.2	201.4	237.0	244.9	243.6
75°	121.1	159.3	193.5	201.4	198.8
77.5°	80.3	122.4	152.7	158.0	155.3
80°	47.4	89.5	111.9	115.9	114.5
82.5°	25.0	60.6	76.4	79.0	76.4
85°	11.8	36.9	47.4	47.4	44.8
87.5°	5.3	19.7	23.7	22.4	19.7
90°	0.0	11.8	13.2	11.8	7.9
92.5°	0.0	9.2	11.8	10.5	7.9
95°	0.0	7.9	11.8	10.5	7.9
97.5°	0.0	5.3	10.5	10.5	7.9
100°	0.0	3.9	9.2	10.5	7.9
102.5°	0.0	3.9	7.9	9.2	7.9
105°	0.0	2.6	6.6	7.9	6.6
107.5°	1.3	2.6	5.3	6.6	5.3
110°	1.3	2.6	3.9	5.3	5.3



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	1.3	1.3	3.9	5.3	3.9
115°	1.3	1.3	3.9	3.9	3.9
117.5°	1.3	1.3	2.6	3.9	3.9
120°	1.3	1.3	2.6	3.9	3.9
122.5°	1.3	1.3	2.6	3.9	3.9
125°	1.3	1.3	2.6	2.6	3.9
127.5°	1.3	1.3	2.6	2.6	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)