

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: P239299

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

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P239299
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1711-412-19)
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-STD-40-IK12-EDC-1
Description: FAILSAFE HDF LED FIXTURE
2FT, 1-ROW LED BOARDS, CLEAR LENS
Light Source: (42) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

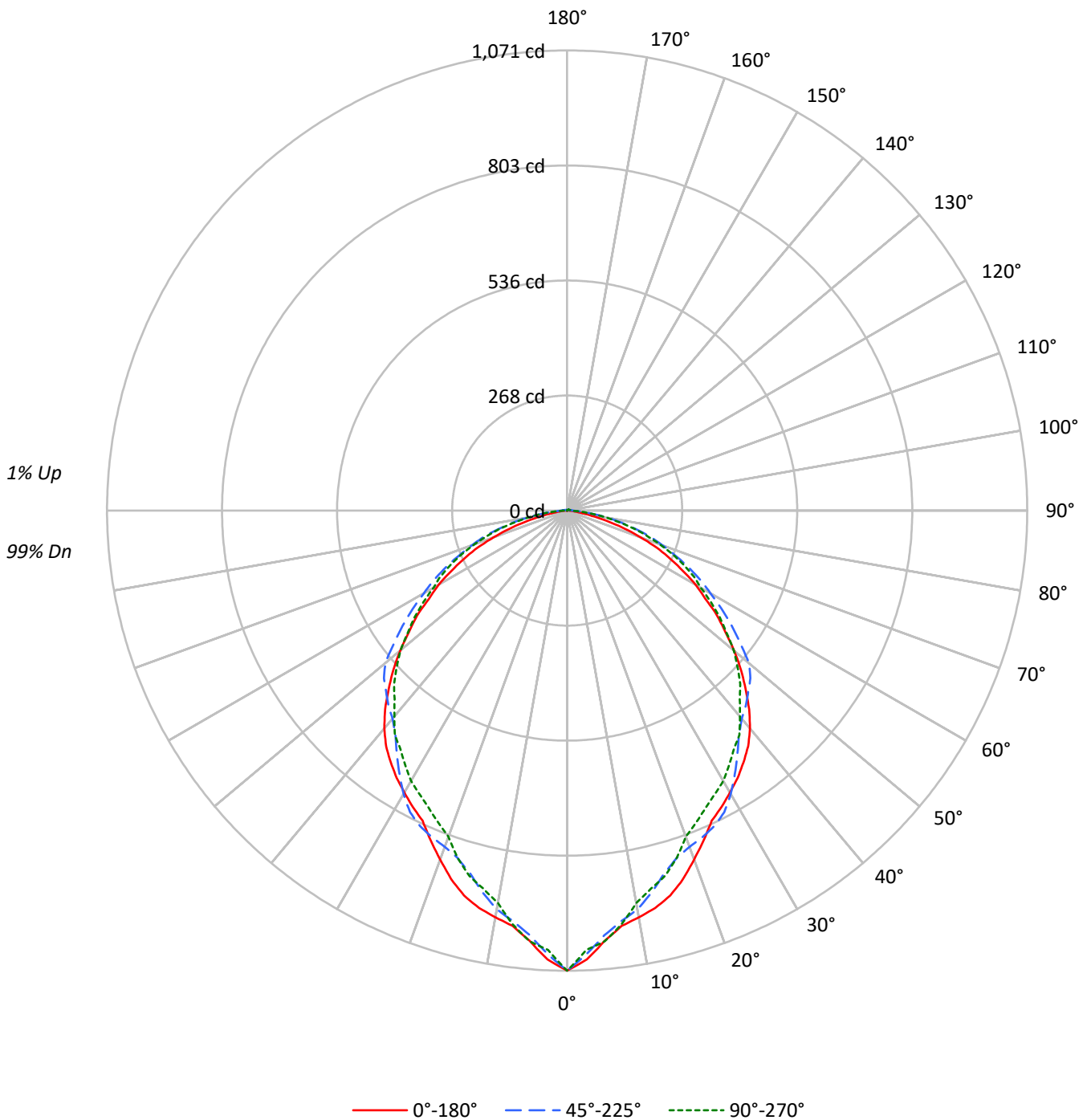
Lumens per Lamp: N/A
Luminaire Lumens: 2503.3 lumens
Efficiency: N/A
Efficacy: 70.1 lumens/watt
Spacing Criteria (0/90/45): 1.06 / 1 / 1.23
Luminous Opening: Rectangular (W 0.58' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 35.7
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	101	101	101	99
1	109	104	100	96	106	102	98	95	97	94	91	93	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	62	55	67	60	54	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	70	57	48	42	69	56	48	42	54	47	41	53	46	41	51	45	41	38
7	65	52	43	37	64	51	43	37	50	42	37	48	41	36	47	41	36	34
8	61	47	39	33	59	47	39	33	45	38	33	44	37	33	43	37	32	30
9	57	44	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°	9879	9879	9879
5°	9305	9190	9317
10°	9004	8829	8688
15°	8858	8346	8406
20°	8482	8176	7931
25°	8108	8249	7766
30°	8074	8114	7742
35°	8059	7778	7624
40°	7972	7612	7537
45°	7660	7775	7433
50°	7282	7926	7264
55°	6857	7520	6978
60°	6372	7108	6624
65°	5770	6776	6532
70°	4910	6355	6188
75°	3600	5864	5689
80°	1987	4968	4771
85°	1059	3822	3694



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	93.5	3.7
10°-20°	249.7	10.0
20°-30°	367.3	14.7
30°-40°	435.5	17.4
40°-50°	446.9	17.9
50°-60°	403.9	16.1
60°-70°	292.5	11.7
70°-80°	156.4	6.2
80°-90°	39.3	1.6
90°-100°	8.0	0.3
100°-110°	4.8	0.2
110°-120°	2.7	0.1
120°-130°	2.0	0.1
130°-140°	1.0	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°	710.5	28.4
0°-40°	1146.0	45.8
0°-60°	1996.8	79.8
0°-90°	2484.9	99.3
90°-120°	15.4	0.6
90°-150°	18.4	0.7
90°-180°	18.0	0.7
0°-180°	2503.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1071	1071	1071	1071	1071	
5°	1005	992	992	995	1006	95
15°	927	888	874	875	880	260
25°	796	809	810	782	763	371
35°	716	704	691	693	677	447
45°	587	573	596	563	570	453
55°	426	452	468	470	434	379
65°	264	277	310	312	299	261
75°	101	132	164	163	160	110
85°	10	29	36	36	35	14
90°	0	10	11	10	8	1
95°	0	6	10	9	8	0
105°	0	2	5	6	6	1
115°	1	1	2	4	4	1
125°	1	1	2	2	4	1
135°	1	1	1	2	4	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-STD-40-IK12-EDC-1

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1070.8	1070.8	1070.8	1070.8	1070.8
2.5°	1045.9	1039.6	1033.4	1024.7	1023.4
5°	1004.7	992.3	992.3	994.7	1006.0
7.5°	974.8	964.8	963.6	964.8	971.1
10°	961.1	947.4	942.4	923.7	927.4
12.5°	947.4	922.4	910.0	897.5	901.3
15°	927.4	887.5	873.8	875.1	880.1
17.5°	898.8	861.4	847.7	853.9	847.7
20°	863.9	842.7	832.7	829.0	807.8
22.5°	830.2	825.2	822.7	800.3	785.3
25°	796.5	809.0	810.3	781.6	762.9
27.5°	777.8	794.1	791.6	765.4	744.2
30°	757.9	770.4	761.6	750.4	726.7
32.5°	738.0	740.5	726.7	728.0	701.8
35°	715.5	704.3	690.6	693.1	676.9
37.5°	691.8	671.9	656.9	653.2	658.2
40°	661.9	632.0	632.0	618.3	625.8
42.5°	627.0	604.6	615.8	590.9	594.6
45°	587.1	573.4	595.9	563.4	569.7
47.5°	548.5	546.0	578.4	546.0	537.3
50°	507.3	513.6	552.2	522.3	506.1
52.5°	463.7	486.2	508.6	497.4	467.5
55°	426.3	452.5	467.5	469.9	433.8
57.5°	381.4	406.4	426.3	432.6	396.4
60°	345.3	366.5	385.2	388.9	359.0
62.5°	302.9	322.9	349.0	349.0	332.8
65°	264.3	276.7	310.4	311.6	299.2
67.5°	225.6	235.6	271.7	274.2	265.5
70°	182.0	198.2	235.6	235.6	229.4
72.5°	140.9	165.8	203.2	198.2	193.2
75°	101.0	132.1	164.5	163.3	159.6
77.5°	64.8	101.0	128.4	127.1	123.4
80°	37.4	72.3	93.5	92.2	89.8
82.5°	19.9	48.6	62.3	61.1	59.8
85°	10.0	28.7	36.1	36.1	34.9
87.5°	3.7	16.2	19.9	17.5	16.2
90°	0.0	10.0	11.2	10.0	7.5
92.5°	0.0	7.5	11.2	10.0	7.5
95°	0.0	6.2	10.0	8.7	7.5
97.5°	0.0	5.0	8.7	8.7	7.5
100°	0.0	3.7	7.5	8.7	7.5
102.5°	0.0	2.5	6.2	7.5	6.2
105°	0.0	2.5	5.0	6.2	6.2
107.5°	1.2	2.5	5.0	6.2	6.2
110°	1.2	1.2	3.7	5.0	5.0



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	1.2	1.2	3.7	3.7	5.0
115°	1.2	1.2	2.5	3.7	3.7
117.5°	1.2	1.2	2.5	3.7	3.7
120°	1.2	1.2	2.5	3.7	3.7
122.5°	1.2	1.2	2.5	2.5	3.7
125°	1.2	1.2	2.5	2.5	3.7
127.5°	1.2	1.2	2.5	2.5	3.7
130°	1.2	1.2	2.5	2.5	3.7
132.5°	1.2	1.2	2.5	2.5	3.7
135°	1.2	1.2	1.2	2.5	3.7
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)