

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: P239277

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

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P239277
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1711-412-15)
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-LO-30-OPL-EDC-1
Description: FAILSAFE HDF LED FIXTURE
2FT, 2-ROW LED BOARDS, OPAL LENS
Light Source: (84) 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

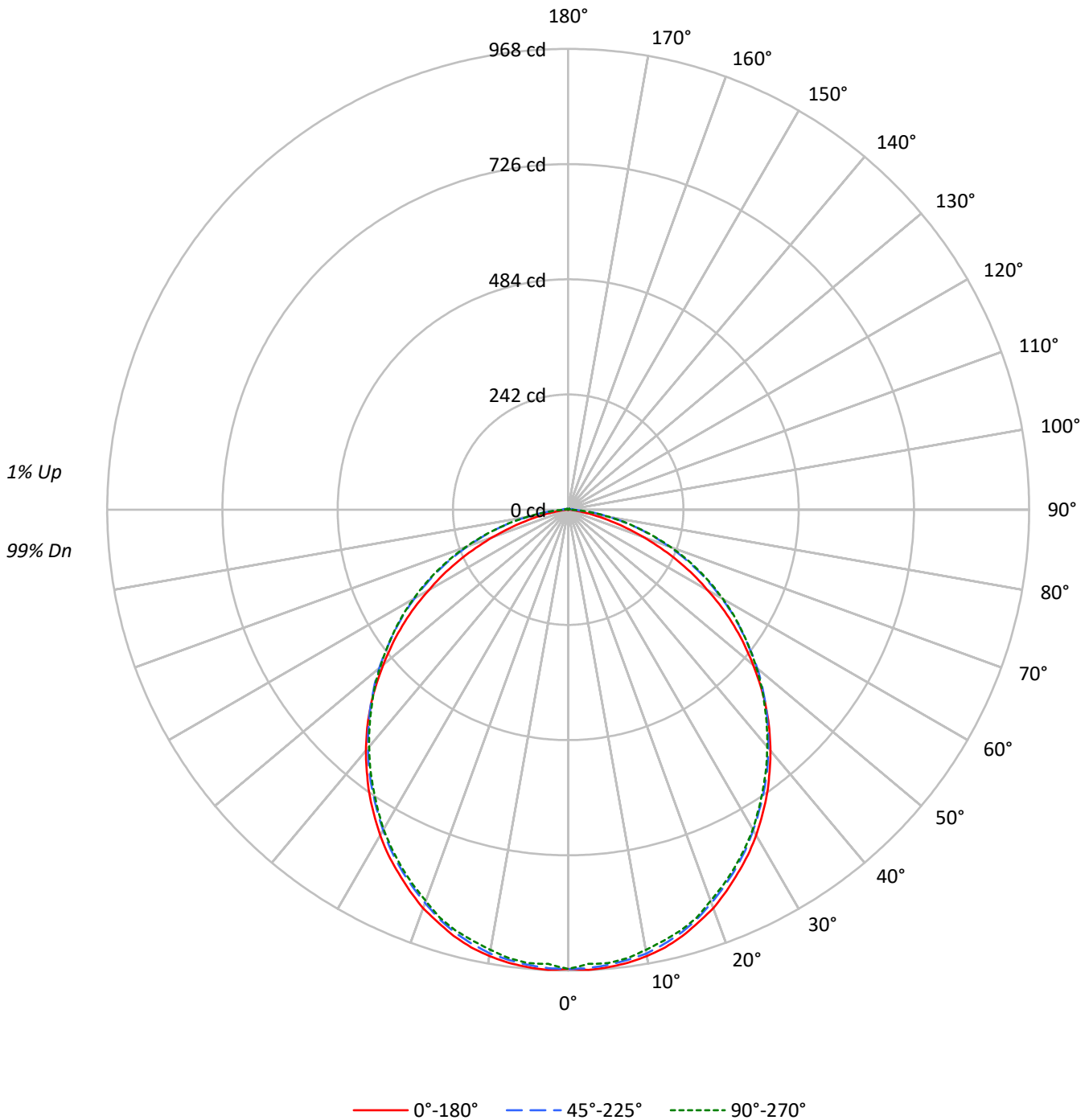
Lumens per Lamp: N/A
Luminaire Lumens: 2520.4 lumens
Efficiency: N/A
Efficacy: 108.2 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.2 / 1.32
Luminous Opening: Rectangular (W 0.58' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 23.3
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	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	71
3	91	81	73	66	88	79	72	66	76	70	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°	8901	8901	8901
5°	8935	8890	8855
10°	8921	8867	8795
15°	8856	8783	8737
20°	8745	8631	8584
25°	8578	8470	8431
30°	8413	8280	8260
35°	8201	8082	8038
40°	7959	7878	7831
45°	7668	7668	7619
50°	7276	7441	7401
55°	6838	7148	7179
60°	6230	6868	6922
65°	5523	6530	6615
70°	4540	6045	6150
75°	3326	5486	5554
80°	1945	4649	4649
85°	1016	3769	3462



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	91.2	3.6
10°-20°	259.2	10.3
20°-30°	383.8	15.2
30°-40°	449.6	17.8
40°-50°	452.3	17.9
50°-60°	393.8	15.6
60°-70°	285.8	11.3
70°-80°	150.4	6.0
80°-90°	37.7	1.5
90°-100°	7.4	0.3
100°-110°	4.2	0.2
110°-120°	2.4	0.1
120°-130°	1.7	0.1
130°-140°	0.9	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°	734.2	29.1
0°-40°	1183.8	47.0
0°-60°	2029.8	80.5
0°-90°	2503.7	99.3
90°-120°	14.1	0.6
90°-150°	16.7	0.7
90°-180°	17.0	0.7
0°-180°	2520.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	965	965	965	965	965	
5°	965	963	960	956	956	92
15°	927	924	920	917	915	261
25°	843	837	832	829	828	388
35°	728	721	718	716	714	455
45°	588	585	588	587	584	452
55°	425	432	444	449	446	379
65°	253	274	299	305	303	250
75°	93	129	154	158	156	102
85°	10	28	36	36	33	13
90°	0	9	11	9	7	1
95°	0	6	10	9	7	0
105°	1	2	5	6	5	1
115°	1	2	3	3	3	1
125°	1	2	2	3	3	1
135°	2	2	2	2	2	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°	964.8	964.8	964.8	964.8	964.8
2.5°	967.6	967.6	963.8	958.0	955.1
5°	964.8	962.8	959.9	956.1	956.1
7.5°	959.9	958.0	954.2	950.3	950.3
10°	952.2	950.3	946.5	940.7	938.8
12.5°	941.7	939.7	934.0	929.2	927.2
15°	927.2	924.4	919.5	916.7	914.7
17.5°	909.0	907.0	901.3	898.4	898.4
20°	890.7	885.9	879.1	876.3	874.3
22.5°	867.6	862.8	856.1	852.2	852.2
25°	842.6	836.8	832.0	829.1	828.2
27.5°	817.6	809.9	806.0	803.2	802.2
30°	789.7	782.0	777.2	775.3	775.3
32.5°	758.9	752.2	747.4	745.4	744.5
35°	728.1	721.4	717.6	715.6	713.7
37.5°	694.5	688.7	686.8	685.8	682.9
40°	660.8	655.0	654.1	653.1	650.2
42.5°	625.2	621.4	620.4	621.4	617.5
45°	587.7	584.8	587.7	586.7	583.9
47.5°	548.3	548.3	553.1	554.0	551.1
50°	506.9	510.8	518.4	520.4	515.6
52.5°	466.5	471.3	480.9	484.8	480.9
55°	425.1	431.9	444.4	449.2	446.3
57.5°	382.8	392.4	409.8	414.6	411.7
60°	337.6	352.0	372.2	379.0	375.1
62.5°	297.2	313.6	335.7	341.5	339.5
65°	253.0	274.1	299.1	304.9	303.0
67.5°	209.7	234.7	261.6	268.4	266.4
70°	168.3	197.2	224.1	230.8	228.0
72.5°	128.9	161.6	188.5	194.3	191.4
75°	93.3	128.9	153.9	157.7	155.8
77.5°	61.6	98.1	119.3	124.1	121.2
80°	36.6	70.2	87.5	90.4	87.5
82.5°	19.2	47.1	59.6	60.6	57.7
85°	9.6	27.9	35.6	35.6	32.7
87.5°	3.8	14.4	17.3	16.4	14.4
90°	0.0	8.7	10.6	8.7	6.7
92.5°	0.0	7.7	9.6	8.7	5.8
95°	0.0	5.8	9.6	8.7	6.7
97.5°	0.0	4.8	8.7	8.7	6.7
100°	0.0	2.9	7.7	7.7	6.7
102.5°	0.0	2.9	5.8	6.7	5.8
105°	1.0	1.9	4.8	5.8	4.8
107.5°	1.0	1.9	3.8	4.8	4.8
110°	1.0	1.9	3.8	3.8	3.8



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	1.0	1.9	2.9	3.8	2.9
115°	1.0	1.9	2.9	2.9	2.9
117.5°	1.0	1.0	2.9	2.9	2.9
120°	1.0	1.9	1.9	2.9	2.9
122.5°	1.0	1.0	1.9	2.9	1.9
125°	1.0	1.9	1.9	2.9	2.9
127.5°	1.0	1.0	1.9	1.9	1.9
130°	1.9	1.9	1.9	1.9	1.9
132.5°	1.0	1.9	1.9	1.9	1.9
135°	1.9	1.9	1.9	1.9	1.9
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)