

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: P239316

Luminaire Tested: **HDF-2-LD4-UNV-1-LO-50-OPL-EDC-1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P239316
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-LO-50-OPL-EDC-1
Description: FAILSAFE HDF LED FIXTURE
2FT, 1-ROW LED BOARDS, OPAL LENS
Light Source: (42) 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

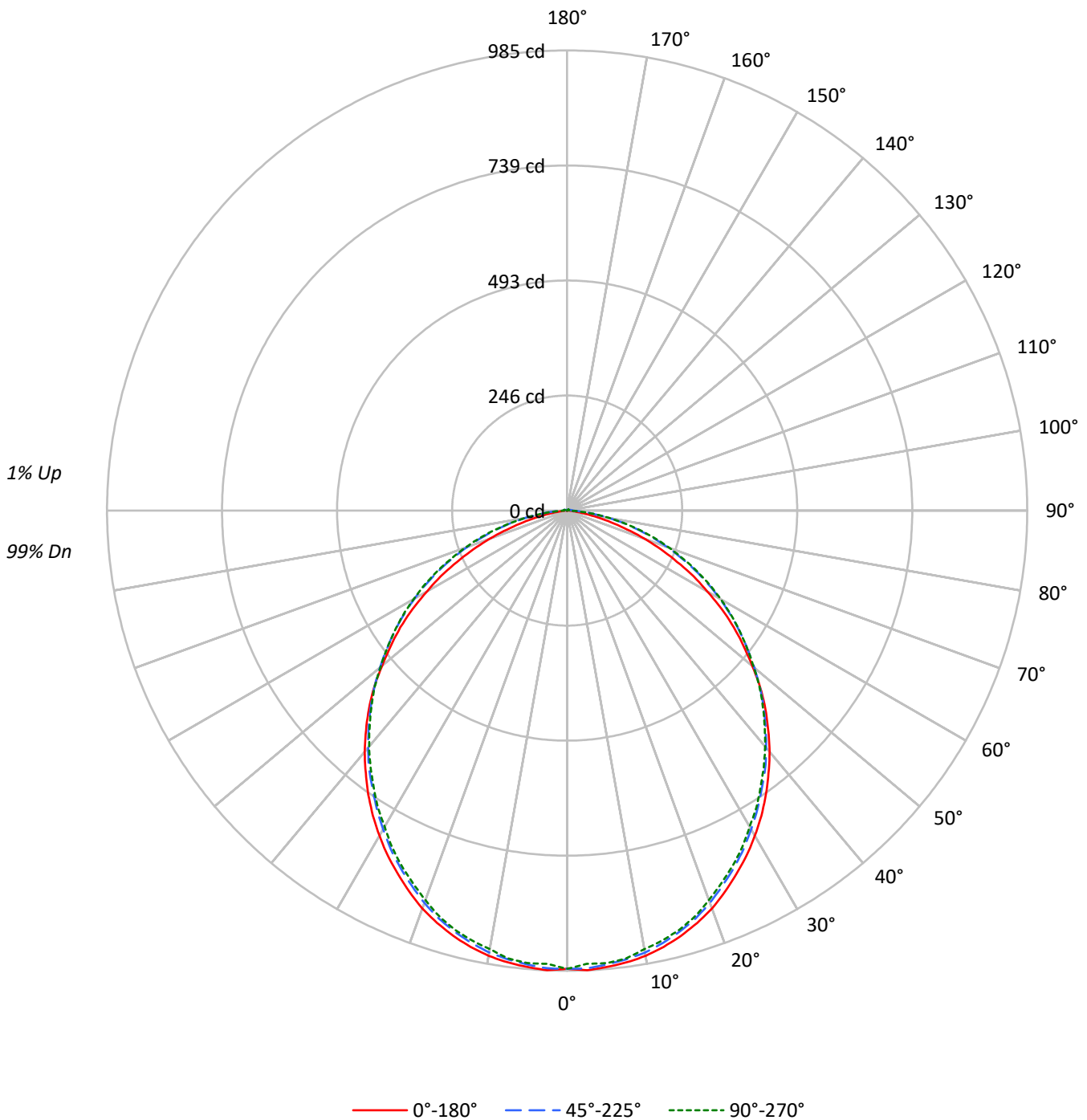
Lumens per Lamp: N/A
Luminaire Lumens: 2556.7 lumens
Efficiency: N/A
Efficacy: 103.5 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.19 / 1.31
Luminous Opening: Rectangular (W 0.58' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 24.7
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	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°	9048	9048	9048
5°	9083	9034	9004
10°	9068	8998	8929
15°	9002	8911	8871
20°	8899	8775	8713
25°	8731	8591	8537
30°	8561	8392	8324
35°	8358	8179	8132
40°	8121	7980	7942
45°	7830	7761	7732
50°	7426	7503	7487
55°	7008	7248	7264
60°	6397	6964	7003
65°	5670	6595	6689
70°	4748	6121	6264
75°	3476	5554	5707
80°	2030	4787	4899
85°	1006	4044	3811



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	92.7	3.6
10°-20°	263.1	10.3
20°-30°	389.4	15.2
30°-40°	455.9	17.8
40°-50°	458.2	17.9
50°-60°	398.4	15.6
60°-70°	289.2	11.3
70°-80°	153.2	6.0
80°-90°	39.7	1.6
90°-100°	7.4	0.3
100°-110°	4.5	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°	745.2	29.1
0°-40°	1201.1	47.0
0°-60°	2057.7	80.5
0°-90°	2539.8	99.3
90°-120°	14.3	0.6
90°-150°	16.9	0.7
90°-180°	17.0	0.7
0°-180°	2556.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	981	981	981	981	981	
5°	981	980	975	971	972	93
15°	942	938	933	930	929	266
25°	858	851	844	840	839	395
35°	742	733	726	723	722	464
45°	600	593	595	594	593	462
55°	436	436	451	454	452	388
65°	260	275	302	308	306	258
75°	98	128	156	162	160	106
85°	10	30	38	38	36	14
90°	0	10	11	10	6	1
95°	0	6	10	8	6	0
105°	0	2	5	6	5	1
115°	1	1	3	3	3	1
125°	1	1	2	2	3	1
135°	1	1	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°	980.7	980.7	980.7	980.7	980.7
2.5°	984.9	983.8	980.7	974.3	971.1
5°	980.7	979.6	975.4	971.1	972.2
7.5°	975.4	973.2	969.0	965.8	966.9
10°	967.9	964.8	960.5	955.2	953.1
12.5°	956.3	954.2	947.8	942.5	942.5
15°	942.5	938.3	932.9	929.8	928.7
17.5°	925.5	920.2	914.9	910.7	910.7
20°	906.4	900.1	893.7	888.4	887.4
22.5°	883.1	876.8	869.3	864.0	863.0
25°	857.7	851.3	843.9	839.7	838.6
27.5°	832.2	823.8	817.4	812.1	812.1
30°	803.6	795.1	787.7	783.5	781.3
32.5°	773.9	764.4	758.0	753.8	753.8
35°	742.1	732.6	726.2	723.0	722.0
37.5°	708.2	699.7	696.5	693.4	691.2
40°	674.3	665.8	662.6	660.5	659.4
42.5°	637.2	629.7	628.7	626.6	625.5
45°	600.1	592.6	594.8	593.7	592.6
47.5°	560.8	555.5	559.8	559.8	558.7
50°	517.4	515.2	522.7	524.8	521.6
52.5°	476.0	475.0	486.6	488.7	486.6
55°	435.7	435.7	450.6	453.8	451.6
57.5°	392.3	395.4	414.5	418.8	416.6
60°	346.7	355.2	377.4	381.7	379.5
62.5°	305.3	314.9	340.3	346.7	343.5
65°	259.7	274.6	302.1	308.5	306.4
67.5°	217.3	235.4	264.0	271.4	268.2
70°	176.0	197.2	226.9	233.2	232.2
72.5°	134.6	162.2	190.8	197.2	196.1
75°	97.5	128.3	155.8	162.2	160.1
77.5°	64.7	98.6	123.0	127.2	125.1
80°	38.2	72.1	90.1	93.3	92.2
82.5°	20.1	48.8	61.5	63.6	61.5
85°	9.5	29.7	38.2	38.2	36.0
87.5°	4.2	15.9	19.1	18.0	15.9
90°	0.0	9.5	10.6	9.5	6.4
92.5°	0.0	7.4	9.5	8.5	6.4
95°	0.0	6.4	9.5	8.5	6.4
97.5°	0.0	4.2	8.5	8.5	6.4
100°	0.0	3.2	7.4	8.5	6.4
102.5°	0.0	3.2	6.4	7.4	6.4
105°	0.0	2.1	5.3	6.4	5.3
107.5°	1.1	2.1	4.2	5.3	4.2
110°	1.1	2.1	3.2	4.2	4.2



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	1.1	1.1	3.2	4.2	3.2
115°	1.1	1.1	3.2	3.2	3.2
117.5°	1.1	1.1	2.1	3.2	3.2
120°	1.1	1.1	2.1	3.2	3.2
122.5°	1.1	1.1	2.1	3.2	3.2
125°	1.1	1.1	2.1	2.1	3.2
127.5°	1.1	1.1	2.1	2.1	2.1
130°	1.1	1.1	2.1	2.1	2.1
132.5°	1.1	1.1	2.1	2.1	2.1
135°	1.1	1.1	2.1	2.1	2.1
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)