

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: P239217

Luminaire Tested: **HDF-4-LD4-UNV-1-LO-30-EDC-1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P239217
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-LO-30-EDC-1
Description: FAILSAFE HDF LED FIXTURE
4FT, 1-ROW LED BOARDS, NON-OVERLAY
Light Source: (84) 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

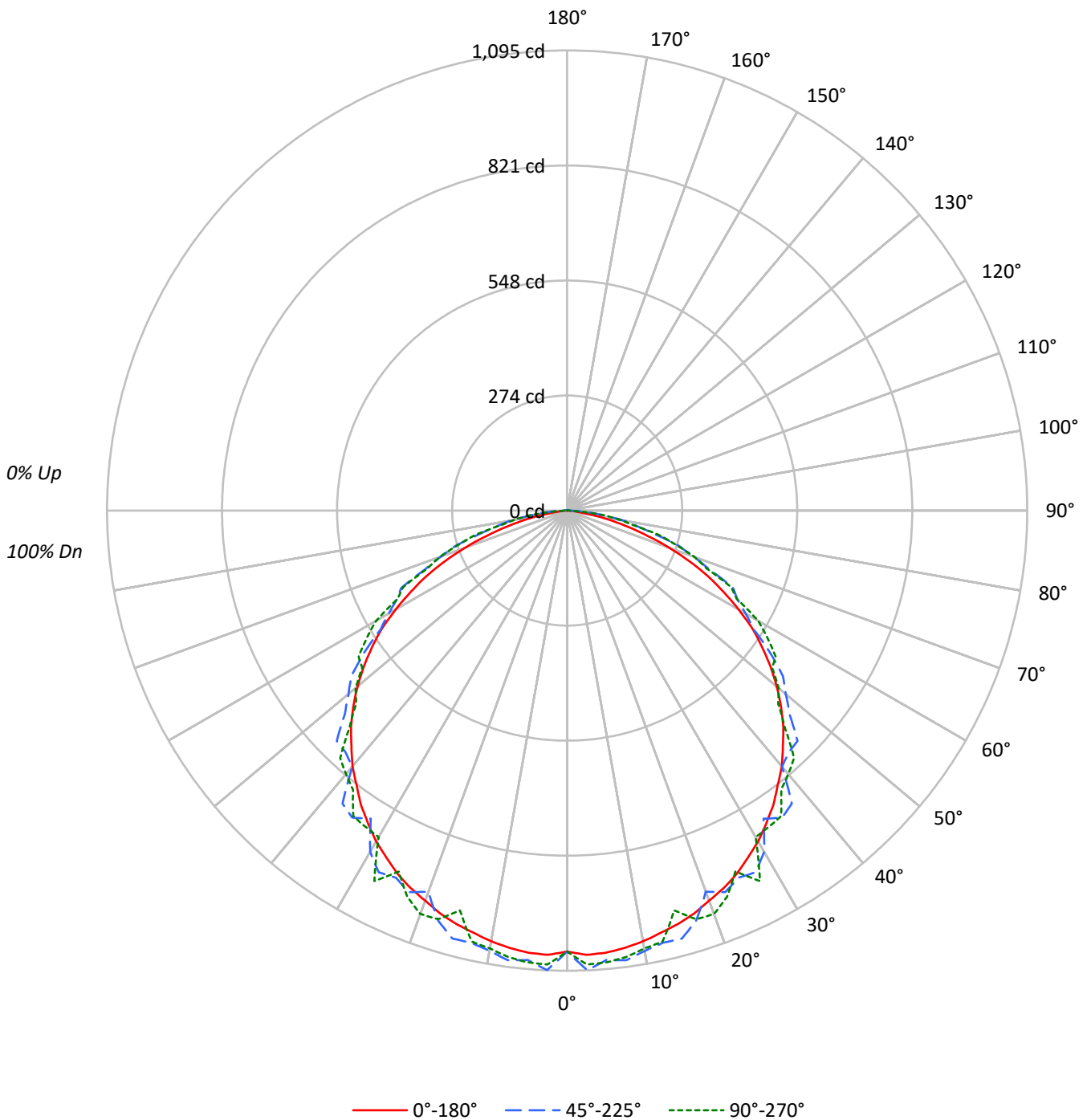
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3156.3 lumens
Efficiency: N/A
Efficacy: 133.7 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): 23.6
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°	4841	4841	4841
5°	4891	4971	4997
10°	4875	4983	4956
15°	4865	5035	4704
20°	4850	4736	5015
25°	4857	4906	4823
30°	4842	4995	4780
35°	4816	5022	5000
40°	4784	4790	4930
45°	4744	5058	4788
50°	4673	4874	4715
55°	4556	4742	4874
60°	4348	4526	4846
65°	4032	4756	4694
70°	3489	4307	4346
75°	2691	3841	4080
80°	1636	3629	3374
85°	762	2699	2493



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	102.0	3.2
10°-20°	291.2	9.2
20°-30°	446.9	14.2
30°-40°	540.8	17.1
40°-50°	573.5	18.2
50°-60°	521.3	16.5
60°-70°	401.6	12.7
70°-80°	215.8	6.8
80°-90°	53.1	1.7
90°-100°	4.5	0.1
100°-110°	2.6	0.1
110°-120°	1.6	0.1
120°-130°	1.0	0.0
130°-140°	0.5	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°	840.1	26.6
0°-40°	1380.9	43.7
0°-60°	2475.7	78.4
0°-90°	3146.1	99.7
90°-120°	8.7	0.3
90°-150°	10.2	0.3
90°-180°	10.0	0.3
0°-180°	3156.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1049	1049	1049	1049	1049	
5°	1056	1090	1074	1076	1079	100
15°	1019	1044	1054	995	985	288
25°	954	972	964	943	948	439
35°	855	820	892	860	888	534
45°	727	763	775	764	734	560
55°	566	595	590	573	606	506
65°	369	383	436	423	430	363
75°	151	186	216	224	229	162
85°	14	44	51	47	47	22
90°	0	9	8	6	5	1
95°	0	5	5	4	4	0
105°	0	2	3	3	3	0
115°	1	1	2	2	2	1
125°	1	1	1	1	1	1
135°	1	1	1	1	1	0
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°	1049.4	1049.4	1049.4	1049.4	1049.4
2.5°	1058.1	1069.6	1094.6	1088.9	1081.2
5°	1056.1	1089.8	1073.5	1076.3	1079.2
7.5°	1049.4	1058.1	1079.2	1068.7	1071.5
10°	1040.8	1058.1	1063.8	1060.0	1058.1
12.5°	1029.2	1054.2	1053.3	1069.6	1050.4
15°	1018.6	1043.6	1054.2	994.6	985.0
17.5°	1005.2	1026.3	1022.5	1007.1	1019.6
20°	987.9	1016.7	964.8	1000.4	1021.5
22.5°	972.5	991.7	983.0	1001.3	994.6
25°	954.2	972.5	963.8	942.6	947.5
27.5°	931.1	962.8	970.5	935.0	993.6
30°	909.0	921.5	937.8	967.7	897.4
32.5°	882.0	865.7	869.5	870.5	892.6
35°	855.1	820.5	891.7	859.9	887.8
37.5°	823.4	821.4	878.2	863.8	836.8
40°	794.5	811.8	795.5	805.1	818.6
42.5°	759.9	783.9	780.1	780.1	799.3
45°	727.2	762.8	775.3	763.7	733.9
47.5°	690.6	703.1	717.6	705.1	681.0
50°	651.2	632.0	679.1	642.5	657.0
52.5°	609.8	646.4	647.3	611.8	614.6
55°	566.5	595.4	589.6	573.3	606.0
57.5°	523.3	520.4	526.2	568.5	565.6
60°	471.3	488.6	490.6	516.5	525.2
62.5°	420.3	458.8	455.9	479.0	455.0
65°	369.4	382.8	435.7	423.2	430.0
67.5°	314.5	339.5	366.5	373.2	358.8
70°	258.7	288.6	319.3	317.4	322.2
72.5°	201.0	224.1	277.0	253.9	271.3
75°	151.0	185.6	215.5	224.1	228.9
77.5°	102.9	147.2	169.3	177.9	161.6
80°	61.6	109.7	136.6	126.0	127.0
82.5°	31.7	65.4	86.6	82.7	91.4
85°	14.4	44.2	51.0	47.1	47.1
87.5°	4.8	20.2	21.2	15.4	13.5
90°	0.0	8.7	7.7	5.8	4.8
92.5°	0.0	5.8	5.8	4.8	3.8
95°	0.0	4.8	4.8	3.8	3.8
97.5°	0.0	3.8	4.8	3.8	2.9
100°	0.0	2.9	3.8	3.8	2.9
102.5°	0.0	1.9	3.8	3.8	2.9
105°	0.0	1.9	2.9	2.9	2.9
107.5°	0.0	1.9	2.9	2.9	2.9
110°	0.0	1.0	2.9	2.9	1.9



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CANDELA DISTRIBUTION (continued):

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