

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: P239225

Luminaire Tested: **HDF-4-LD4-UNV-1-STD-30-IK12-EDC-1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P239225
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1711-412-9)
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-STD-30-IK12-EDC-1
Description: FAILSAFE HDF LED FIXTURE
4FT, 1-ROW LED BOARDS, CLEAR LENS
Light Source: (84) 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

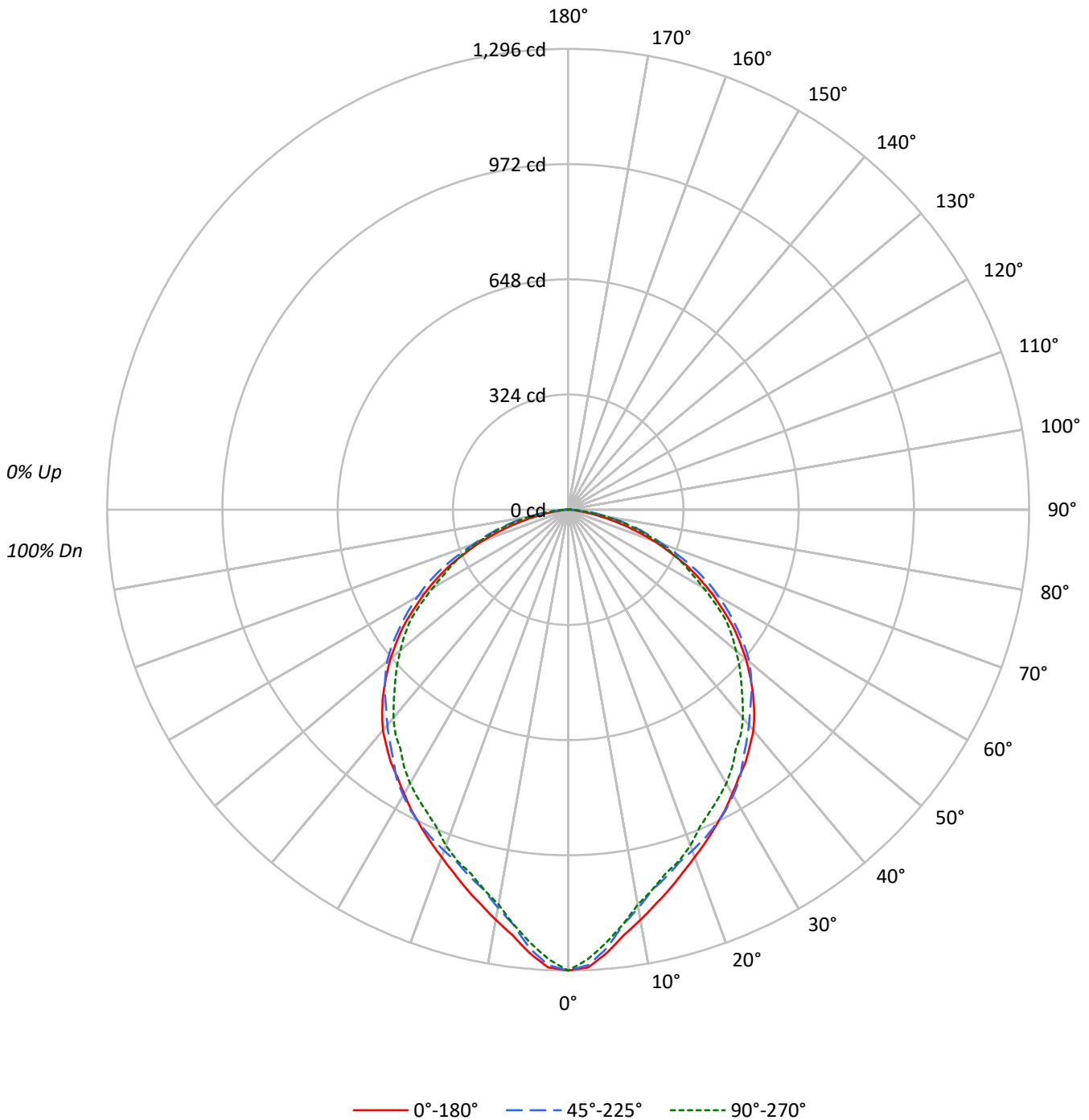
Lumens per Lamp: N/A
Luminaire Lumens: 3065.7 lumens
Efficiency: N/A
Efficacy: 91.0 lumens/watt
Spacing Criteria (0/90/45): 1.07 / 1.02 / 1.25
Luminous Opening: Rectangular (W 0.58' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 33.7
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	102	102	102	100
1	109	104	100	96	106	102	98	95	98	94	92	94	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	61	55	67	60	54	65	59	54	62	57	53	51
5	76	63	55	48	74	62	54	48	60	53	47	58	52	47	56	51	46	44
6	70	57	48	42	68	56	48	42	54	47	41	53	46	41	51	45	40	38
7	65	52	43	37	64	51	43	37	49	42	37	48	41	36	47	41	36	34
8	61	47	39	33	59	47	39	33	45	38	33	44	37	32	43	37	32	30
9	57	43	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°	5979	5979	5979
5°	5793	5733	5662
10°	5486	5323	5281
15°	5273	5101	5058
20°	5104	5009	4933
25°	4997	4984	4781
30°	4913	4941	4735
35°	4890	4825	4629
40°	4880	4763	4601
45°	4799	4757	4488
50°	4679	4771	4419
55°	4518	4652	4352
60°	4267	4505	4041
65°	3951	4275	3867
70°	3441	3805	3666
75°	2686	3513	3306
80°	1711	2909	2670
85°	752	2043	1911



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	114.6	3.7
10°-20°	303.0	9.9
20°-30°	446.2	14.6
30°-40°	532.1	17.4
40°-50°	548.1	17.9
50°-60°	502.0	16.4
60°-70°	368.3	12.0
70°-80°	193.2	6.3
80°-90°	44.3	1.4
90°-100°	6.8	0.2
100°-110°	3.4	0.1
110°-120°	1.8	0.1
120°-130°	1.2	0.0
130°-140°	0.6	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°	863.7	28.2
0°-40°	1395.9	45.5
0°-60°	2446.0	79.8
0°-90°	3051.8	99.5
90°-120°	12.0	0.4
90°-150°	13.8	0.5
90°-180°	14.0	0.5
0°-180°	3065.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1296	1296	1296	1296	1296	
5°	1251	1238	1238	1225	1223	117
15°	1104	1082	1068	1060	1059	311
25°	982	971	979	953	939	453
35°	868	858	857	839	822	543
45°	736	707	729	688	688	566
55°	562	567	578	563	541	500
65°	362	367	392	372	354	356
75°	151	173	197	193	186	162
85°	14	32	39	39	36	22
90°	0	9	9	8	6	1
95°	0	5	9	8	6	0
105°	0	1	4	5	5	0
115°	1	1	1	3	3	1
125°	1	1	1	1	1	1
135°	1	1	1	1	1	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°	1296.0	1296.0	1296.0	1296.0	1296.0
2.5°	1288.3	1279.3	1281.8	1272.8	1265.1
5°	1250.9	1238.0	1238.0	1225.2	1222.6
7.5°	1205.8	1182.6	1177.5	1174.9	1176.2
10°	1171.1	1140.1	1136.3	1120.8	1127.3
12.5°	1136.3	1111.8	1095.0	1080.9	1093.8
15°	1104.1	1082.2	1068.0	1060.3	1059.0
17.5°	1070.6	1052.5	1039.6	1039.6	1035.8
20°	1039.6	1022.9	1020.3	1015.2	1004.9
22.5°	1011.3	994.6	1001.0	986.8	966.2
25°	981.7	971.4	979.1	953.3	939.2
27.5°	953.3	950.8	955.9	926.3	914.7
30°	922.4	923.7	927.6	900.5	888.9
32.5°	892.8	894.1	897.9	873.5	858.0
35°	868.3	858.0	856.7	838.7	821.9
37.5°	838.7	820.6	823.2	801.3	797.4
40°	810.3	785.9	791.0	764.0	764.0
42.5°	774.3	743.3	757.5	729.2	725.3
45°	735.6	707.3	729.2	687.9	687.9
47.5°	693.1	669.9	697.0	654.4	653.2
50°	651.9	637.7	664.8	626.1	615.8
52.5°	606.8	605.5	623.5	590.0	579.7
55°	561.7	566.8	578.4	563.0	541.1
57.5°	510.2	524.3	534.6	524.3	489.5
60°	462.5	475.4	488.3	470.2	438.0
62.5°	413.5	422.6	443.2	421.3	392.9
65°	362.0	367.2	391.6	372.3	354.3
67.5°	305.3	313.1	335.0	329.8	315.6
70°	255.1	260.2	282.1	288.6	271.8
72.5°	202.3	215.1	238.3	235.8	229.3
75°	150.7	172.6	197.1	193.2	185.5
77.5°	104.4	128.8	152.0	149.4	145.6
80°	64.4	87.6	109.5	108.2	100.5
82.5°	32.2	56.7	73.4	69.6	63.1
85°	14.2	32.2	38.6	38.6	36.1
87.5°	3.9	15.5	19.3	16.7	15.5
90°	0.0	9.0	9.0	7.7	6.4
92.5°	0.0	7.7	9.0	7.7	6.4
95°	0.0	5.2	9.0	7.7	6.4
97.5°	0.0	3.9	7.7	7.7	6.4
100°	0.0	2.6	6.4	6.4	6.4
102.5°	0.0	2.6	5.2	5.2	5.2
105°	0.0	1.3	3.9	5.2	5.2
107.5°	0.0	1.3	2.6	3.9	3.9
110°	0.0	1.3	2.6	2.6	3.9



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.0	1.3	2.6	2.6	2.6
115°	1.3	1.3	1.3	2.6	2.6
117.5°	1.3	1.3	1.3	2.6	2.6
120°	1.3	1.3	1.3	1.3	2.6
122.5°	1.3	1.3	1.3	1.3	1.3
125°	1.3	1.3	1.3	1.3	1.3
127.5°	1.3	1.3	1.3	1.3	1.3
130°	1.3	1.3	1.3	1.3	1.3
132.5°	1.3	1.3	1.3	1.3	1.3
135°	1.3	1.3	1.3	1.3	1.3
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)