

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: P239253

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

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P239253
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1711-412-13)
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-EDC-1
Description: FAILSAFE HDF LED FIXTURE
2FT, 2-ROW LED BOARDS, NON-OVERLAY
Light Source: (84) 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

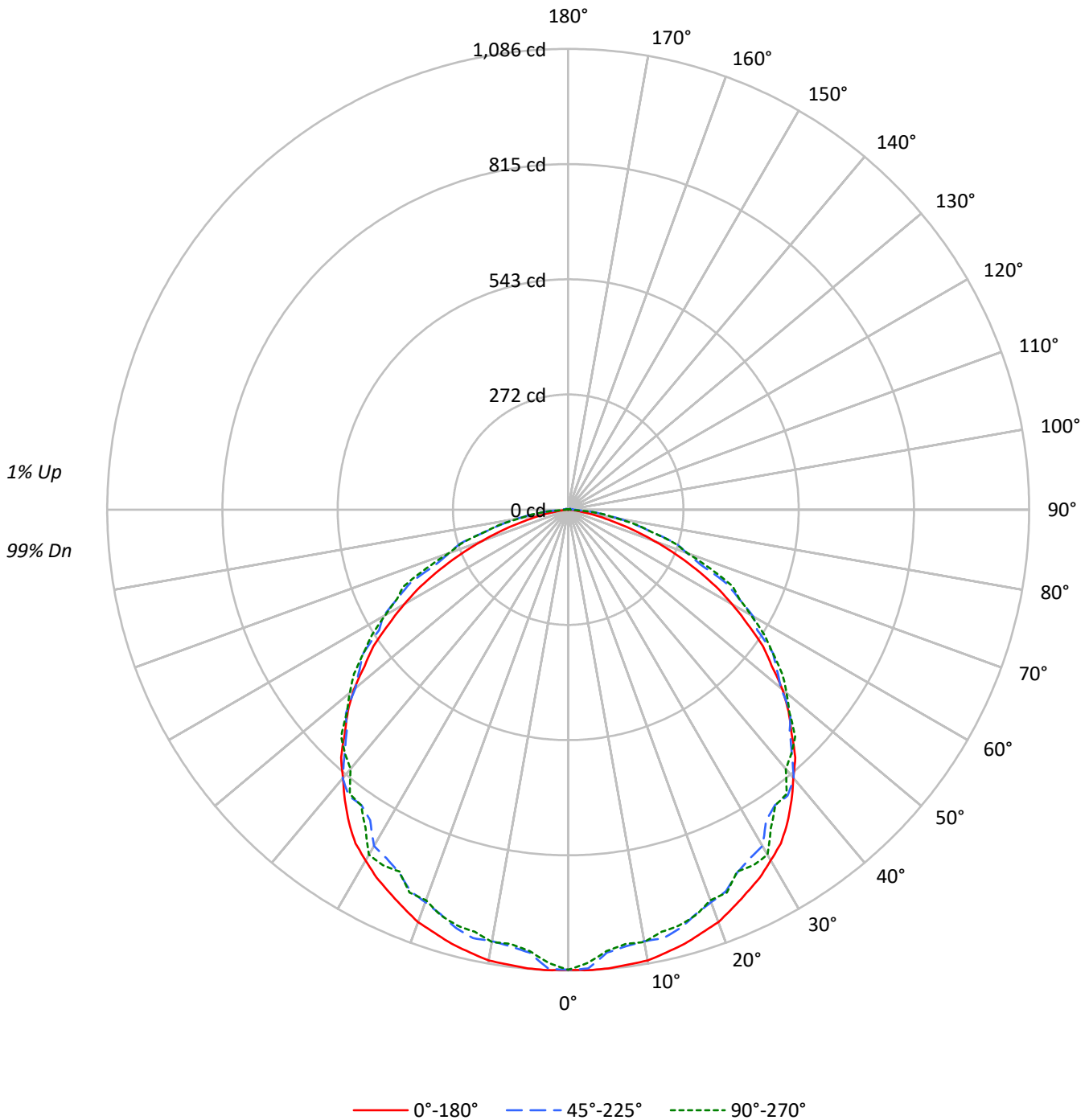
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3103.4 lumens
Efficiency: N/A
Efficacy: 133.2 lumens/watt
Spacing Criteria (0/90/45): 1.31 / 1.26 / 1.39
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

TEST NUMBER: P239253
CATALOG NUMBER: HDF-2-LD4-UNV-2-LO-30-EDC-1

Luminous Intensity Polar Plot





TEST NUMBER: P239253

CATALOG NUMBER: HDF-2-LD4-UNV-2-LO-30-EDC-1

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	99
1	109	104	100	96	106	102	98	94	97	94	91	93	91	88	90	87	86	83
2	99	91	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	69
3	90	79	71	65	87	78	70	64	75	68	63	72	66	62	69	65	61	58
4	82	70	61	55	80	69	61	54	66	59	54	64	58	53	62	56	52	50
5	76	63	54	47	74	62	53	47	59	52	46	57	51	46	55	50	45	43
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	37
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33
8	60	47	38	32	59	46	38	32	44	37	32	43	36	32	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	29	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10003	10003	10003
5°	10051	9703	9667
10°	10104	9671	9689
15°	10117	9749	9685
20°	10154	9663	9616
25°	10136	9598	9578
30°	10168	9747	10004
35°	10142	9568	9579
40°	9941	9953	9605
45°	9704	9628	9867
50°	9459	9390	9638
55°	9006	9471	9455
60°	8237	9285	9178
65°	7246	8990	9346
70°	5865	7993	8044
75°	4082	7272	7272
80°	2301	6493	6131
85°	1122	5801	4690



TEST NUMBER: P239253

CATALOG NUMBER: HDF-2-LD4-UNV-2-LO-30-EDC-1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	100.6	3.2
10°-20°	288.2	9.3
20°-30°	441.5	14.2
30°-40°	542.0	17.5
40°-50°	568.2	18.3
50°-60°	512.5	16.5
60°-70°	379.4	12.2
70°-80°	201.3	6.5
80°-90°	52.4	1.7
90°-100°	7.6	0.2
100°-110°	4.4	0.1
110°-120°	2.7	0.1
120°-130°	1.7	0.1
130°-140°	0.8	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°	830.4	26.8
0°-40°	1372.4	44.2
0°-60°	2453.1	79.0
0°-90°	3086.2	99.4
90°-120°	14.8	0.5
90°-150°	17.2	0.6
90°-180°	17.0	0.5
0°-180°	3103.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1084	1084	1084	1084	1084	
5°	1085	1081	1048	1034	1044	103
15°	1059	1018	1021	1008	1014	299
25°	996	962	943	941	941	460
35°	900	848	850	871	850	562
45°	744	722	738	743	756	576
55°	560	563	589	599	588	495
65°	332	349	412	397	428	329
75°	114	170	204	218	204	127
85°	11	41	55	54	44	16
90°	0	12	12	10	6	1
95°	0	8	10	8	5	0
105°	0	3	6	6	4	1
115°	1	2	4	4	3	1
125°	1	1	2	3	2	1
135°	1	1	2	2	2	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



TEST NUMBER: P239253

CATALOG NUMBER: HDF-2-LD4-UNV-2-LO-30-EDC-1

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1084.2	1084.2	1084.2	1084.2	1084.2
2.5°	1086.2	1084.2	1082.3	1074.6	1068.8
5°	1085.2	1081.3	1047.7	1034.2	1043.8
7.5°	1081.3	1066.0	1038.1	1033.2	1032.3
10°	1078.5	1040.9	1032.3	1039.0	1034.2
12.5°	1068.8	1025.5	1034.2	1026.5	1018.8
15°	1059.2	1017.9	1020.7	1008.2	1014.0
17.5°	1045.8	1002.5	999.6	1010.2	1001.5
20°	1034.2	984.2	984.2	978.4	979.4
22.5°	1015.0	978.4	972.6	976.5	976.5
25°	995.7	962.1	942.8	940.9	940.9
27.5°	977.4	932.2	926.5	916.8	944.7
30°	954.4	902.4	914.9	928.4	939.0
32.5°	932.2	873.5	867.8	918.8	888.9
35°	900.5	848.5	849.5	870.7	850.5
37.5°	863.9	826.4	849.5	830.3	844.7
40°	825.4	786.0	826.4	812.9	797.5
42.5°	791.8	743.7	779.3	768.7	778.3
45°	743.7	722.5	737.9	742.7	756.2
47.5°	704.2	678.2	710.0	724.4	707.1
50°	659.0	620.5	654.2	667.7	671.5
52.5°	604.2	585.9	619.6	640.7	635.9
55°	559.9	562.8	588.8	599.4	587.8
57.5°	500.3	518.5	528.2	538.8	547.4
60°	446.4	452.2	503.2	497.4	497.4
62.5°	392.5	408.9	453.1	458.9	454.1
65°	331.9	349.2	411.8	397.3	428.1
67.5°	274.2	298.2	336.7	377.1	361.7
70°	217.4	256.9	296.3	312.7	298.2
72.5°	163.5	209.7	268.4	258.8	263.6
75°	114.5	170.3	204.0	218.4	204.0
77.5°	74.1	126.0	160.7	172.2	165.5
80°	43.3	95.2	122.2	127.0	115.4
82.5°	23.1	64.5	84.7	85.6	84.7
85°	10.6	41.4	54.8	53.9	44.3
87.5°	4.8	25.0	23.1	17.3	12.5
90°	0.0	12.5	12.5	9.6	5.8
92.5°	0.0	9.6	10.6	8.7	4.8
95°	0.0	7.7	9.6	7.7	4.8
97.5°	0.0	5.8	8.7	6.7	4.8
100°	0.0	4.8	7.7	6.7	3.8
102.5°	0.0	3.8	6.7	5.8	3.8
105°	0.0	2.9	5.8	5.8	3.8
107.5°	1.0	1.9	5.8	4.8	3.8
110°	1.0	1.9	4.8	4.8	2.9



TEST NUMBER: P239253

CATALOG NUMBER: HDF-2-LD4-UNV-2-LO-30-EDC-1

CANDELA DISTRIBUTION (continued):

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