

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: P239269

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

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P239269
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-HI-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

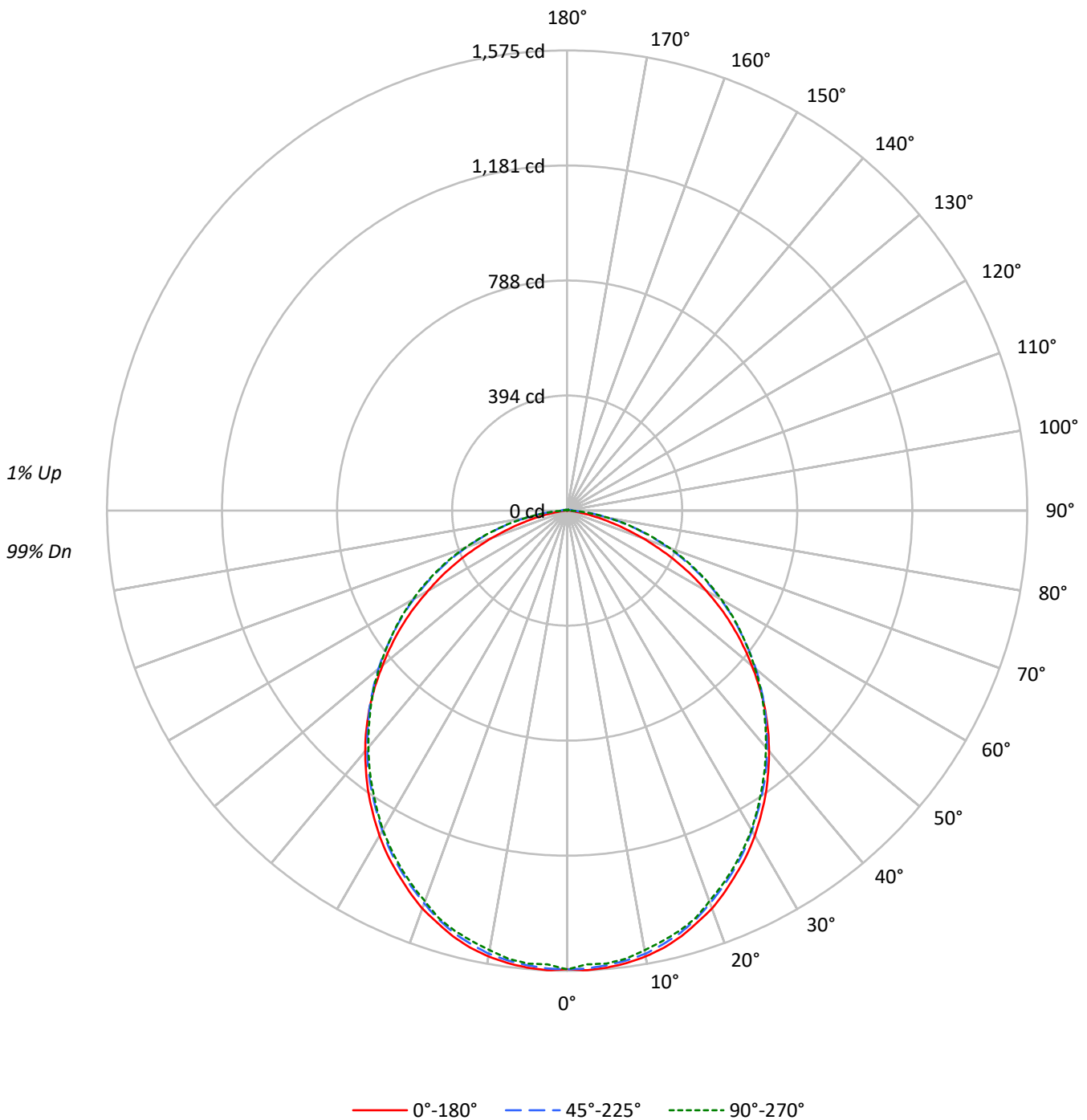
Lumens per Lamp: N/A
Luminaire Lumens: 4101.8 lumens
Efficiency: N/A
Efficacy: 93.4 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.2 / 1.32
Luminous Opening: Rectangular (W 0.58' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 43.9
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: P239269

CATALOG NUMBER: HDF-2-LD4-UNV-2-HI-30-OPL-EDC-1

Luminous Intensity Polar Plot





TEST NUMBER: P239269

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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	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°	14485	14485	14485
5°	14540	14468	14411
10°	14518	14430	14313
15°	14413	14294	14219
20°	14232	14047	13971
25°	13959	13784	13721
30°	13691	13475	13442
35°	13347	13152	13082
40°	12952	12820	12745
45°	12479	12479	12398
50°	11840	12110	12043
55°	11130	11633	11683
60°	10138	11178	11265
65°	8988	10627	10765
70°	7389	9838	10008
75°	5411	8930	9040
80°	3161	7566	7566
85°	1662	6129	5632



TEST NUMBER: P239269

CATALOG NUMBER: HDF-2-LD4-UNV-2-HI-30-OPL-EDC-1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	148.4	3.6
10°-20°	421.8	10.3
20°-30°	624.6	15.2
30°-40°	731.7	17.8
40°-50°	736.0	17.9
50°-60°	640.9	15.6
60°-70°	465.2	11.3
70°-80°	244.8	6.0
80°-90°	61.3	1.5
90°-100°	12.0	0.3
100°-110°	6.9	0.2
110°-120°	4.0	0.1
120°-130°	2.8	0.1
130°-140°	1.5	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°	1194.8	29.1
0°-40°	1926.4	47.0
0°-60°	3303.3	80.5
0°-90°	4074.6	99.3
90°-120°	22.9	0.6
90°-150°	27.2	0.7
90°-180°	27.0	0.7
0°-180°	4101.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1570	1570	1570	1570	1570	
5°	1570	1567	1562	1556	1556	149
15°	1509	1504	1496	1492	1489	425
25°	1371	1362	1354	1349	1348	632
35°	1185	1174	1168	1165	1162	740
45°	956	952	956	955	950	736
55°	692	703	723	731	726	617
65°	412	446	487	496	493	407
75°	152	210	250	257	254	165
85°	16	45	58	58	53	22
90°	0	14	17	14	11	1
95°	0	9	16	14	11	0
105°	2	3	8	9	8	1
115°	2	3	5	5	5	2
125°	2	3	3	5	5	2
135°	3	3	3	3	3	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



TEST NUMBER: P239269

CATALOG NUMBER: HDF-2-LD4-UNV-2-HI-30-OPL-EDC-1

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1570.0	1570.0	1570.0	1570.0	1570.0
2.5°	1574.7	1574.7	1568.5	1559.1	1554.4
5°	1570.0	1566.9	1562.2	1556.0	1556.0
7.5°	1562.2	1559.1	1552.8	1546.6	1546.6
10°	1549.7	1546.6	1540.3	1530.9	1527.8
12.5°	1532.5	1529.3	1519.9	1512.1	1509.0
15°	1509.0	1504.3	1496.5	1491.8	1488.6
17.5°	1479.3	1476.1	1466.7	1462.0	1462.0
20°	1449.5	1441.7	1430.7	1426.0	1422.9
22.5°	1411.9	1404.1	1393.2	1386.9	1386.9
25°	1371.2	1361.9	1354.0	1349.3	1347.8
27.5°	1330.5	1318.0	1311.8	1307.1	1305.5
30°	1285.1	1272.6	1264.8	1261.7	1261.7
32.5°	1235.1	1224.1	1216.3	1213.1	1211.6
35°	1185.0	1174.0	1167.7	1164.6	1161.5
37.5°	1130.2	1120.8	1117.7	1116.1	1111.4
40°	1075.4	1066.0	1064.4	1062.9	1058.2
42.5°	1017.5	1011.2	1009.6	1011.2	1005.0
45°	956.4	951.7	956.4	954.9	950.2
47.5°	892.2	892.2	900.1	901.6	896.9
50°	824.9	831.2	843.7	846.9	839.0
52.5°	759.2	767.0	782.7	788.9	782.7
55°	691.9	702.8	723.2	731.0	726.3
57.5°	623.0	638.7	666.8	674.7	670.0
60°	549.4	572.9	605.8	616.7	610.5
62.5°	483.7	510.3	546.3	555.7	552.6
65°	411.7	446.1	486.8	496.2	493.1
67.5°	341.2	381.9	425.8	436.7	433.6
70°	273.9	320.9	364.7	375.7	371.0
72.5°	209.8	263.0	306.8	316.2	311.5
75°	151.8	209.8	250.5	256.7	253.6
77.5°	100.2	159.7	194.1	201.9	197.2
80°	59.5	114.3	142.4	147.1	142.4
82.5°	31.3	76.7	97.1	98.6	93.9
85°	15.7	45.4	57.9	57.9	53.2
87.5°	6.3	23.5	28.2	26.6	23.5
90°	0.0	14.1	17.2	14.1	11.0
92.5°	0.0	12.5	15.7	14.1	9.4
95°	0.0	9.4	15.7	14.1	11.0
97.5°	0.0	7.8	14.1	14.1	11.0
100°	0.0	4.7	12.5	12.5	11.0
102.5°	0.0	4.7	9.4	11.0	9.4
105°	1.6	3.1	7.8	9.4	7.8
107.5°	1.6	3.1	6.3	7.8	7.8
110°	1.6	3.1	6.3	6.3	6.3



TEST NUMBER: P239269

CATALOG NUMBER: HDF-2-LD4-UNV-2-HI-30-OPL-EDC-1

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	1.6	3.1	4.7	6.3	4.7
115°	1.6	3.1	4.7	4.7	4.7
117.5°	1.6	1.6	4.7	4.7	4.7
120°	1.6	3.1	3.1	4.7	4.7
122.5°	1.6	1.6	3.1	4.7	3.1
125°	1.6	3.1	3.1	4.7	4.7
127.5°	1.6	1.6	3.1	3.1	3.1
130°	3.1	3.1	3.1	3.1	3.1
132.5°	1.6	3.1	3.1	3.1	3.1
135°	3.1	3.1	3.1	3.1	3.1
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)