

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: P239263

Luminaire Tested: **HDF-2-LD4-UNV-2-STD-40-IK12-EDC-1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P239263
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1711-412-14)
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-STD-40-IK12-EDC-1
Description: FAILSAFE HDF LED FIXTURE
2FT, 2-ROW LED BOARDS, CLEAR LENS
Light Source: (84) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

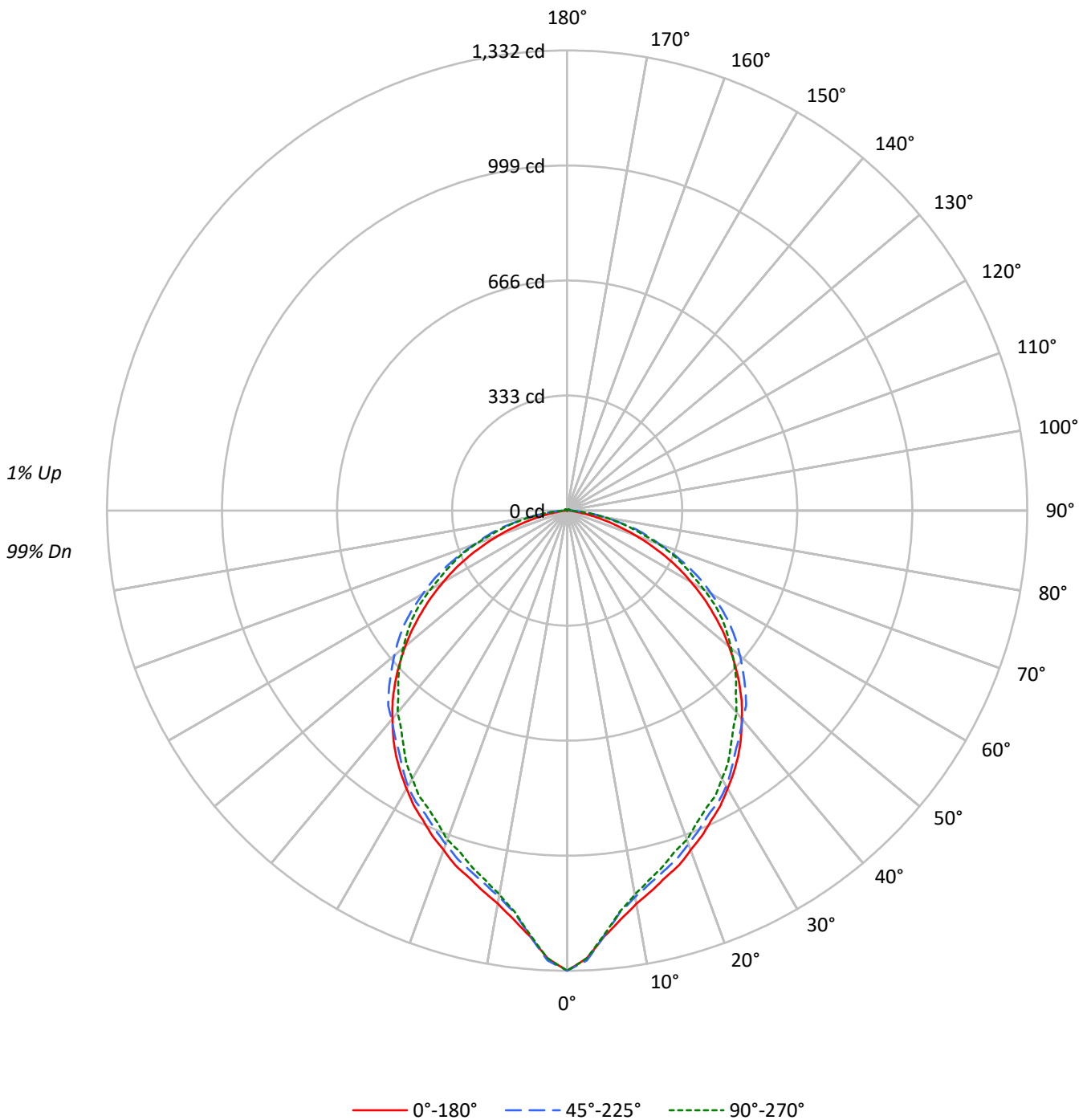
Lumens per Lamp: N/A
Luminaire Lumens: 3060.7 lumens
Efficiency: N/A
Efficacy: 92.2 lumens/watt
Spacing Criteria (0/90/45): 1.05 / 1.01 / 1.23
Luminous Opening: Rectangular (W 0.58' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 33.2
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	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	96	106	102	98	95	98	94	92	94	91	89	90	88	86	84								
2	99	91	84	79	97	89	83	78	85	80	76	82	78	74	79	75	72	70								
3	91	80	72	66	88	78	71	65	75	69	64	73	67	63	70	65	61	59								
4	83	71	62	56	81	70	62	55	67	60	55	65	59	54	62	57	53	51								
5	76	64	55	48	74	62	54	48	60	53	47	58	52	47	56	51	46	44								
6	71	57	48	42	69	56	48	42	54	47	41	53	46	41	51	45	41	39								
7	65	52	43	37	64	51	43	37	50	42	37	48	41	36	47	41	36	34								
8	61	48	39	33	59	47	39	33	45	38	33	44	37	33	43	37	32	30								
9	57	44	35	30	56	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°	12286	12286	12286
5°	11455	11430	11405
10°	10823	10636	10573
15°	10499	10321	10194
20°	10268	10084	9954
25°	10062	9872	9681
30°	9904	9818	9548
35°	9734	9568	9312
40°	9475	9508	9186
45°	9184	9516	9028
50°	8780	9374	8895
55°	8271	9260	8808
60°	7639	8898	8429
65°	6853	8486	8078
70°	5730	7675	7529
75°	4285	7190	6712
80°	2556	5749	5605
85°	1270	4520	3822



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	114.8	3.8
10°-20°	305.9	10.0
20°-30°	448.1	14.6
30°-40°	532.0	17.4
40°-50°	549.4	18.0
50°-60°	493.8	16.1
60°-70°	360.6	11.8
70°-80°	189.1	6.2
80°-90°	45.1	1.5
90°-100°	9.1	0.3
100°-110°	5.7	0.2
110°-120°	3.5	0.1
120°-130°	2.5	0.1
130°-140°	1.3	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°	868.8	28.4
0°-40°	1400.7	45.8
0°-60°	2443.9	79.8
0°-90°	3038.8	99.3
90°-120°	18.3	0.6
90°-150°	22.0	0.7
90°-180°	22.0	0.7
0°-180°	3060.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1332	1332	1332	1332	1332	
5°	1237	1240	1234	1225	1232	116
15°	1099	1098	1080	1080	1067	311
25°	988	976	970	964	951	456
35°	864	860	850	842	827	540
45°	704	717	729	707	692	542
55°	514	545	576	564	548	460
65°	314	345	389	381	370	310
75°	120	164	202	195	188	130
85°	12	31	43	40	36	17
90°	0	11	12	11	8	1
95°	0	7	12	11	8	0
105°	1	3	7	8	8	1
115°	1	1	4	4	5	1
125°	1	1	3	4	4	2
135°	3	1	3	3	4	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°	1331.6	1331.6	1331.6	1331.6	1331.6
2.5°	1296.9	1303.6	1303.6	1299.6	1296.9
5°	1236.8	1239.5	1234.1	1224.8	1231.5
7.5°	1192.7	1187.4	1172.7	1163.3	1170.0
10°	1155.3	1150.0	1135.3	1121.9	1128.6
12.5°	1127.3	1124.6	1105.9	1097.9	1095.2
15°	1099.2	1097.9	1080.5	1080.5	1067.2
17.5°	1076.5	1072.5	1056.5	1051.1	1035.1
20°	1045.8	1045.8	1027.1	1016.4	1013.8
22.5°	1019.1	1003.1	999.1	992.4	979.0
25°	988.4	976.4	969.7	964.3	951.0
27.5°	961.7	948.3	949.6	934.9	929.6
30°	929.6	920.3	921.6	905.6	896.2
32.5°	897.5	890.9	885.5	876.2	866.8
35°	864.2	860.2	849.5	841.5	826.8
37.5°	826.8	826.8	820.1	812.1	790.7
40°	786.7	786.7	789.4	772.0	762.7
42.5°	748.0	752.0	766.7	745.3	722.6
45°	703.9	717.2	729.3	706.6	691.9
47.5°	658.5	675.8	690.5	675.8	655.8
50°	611.7	638.4	653.1	637.1	619.7
52.5°	565.0	591.7	615.7	602.4	583.7
55°	514.2	544.9	575.7	563.6	547.6
57.5°	466.1	500.9	530.2	522.2	506.2
60°	414.0	450.1	482.2	475.5	456.8
62.5°	366.0	398.0	438.1	428.7	410.0
65°	313.9	344.6	388.7	380.7	370.0
67.5°	261.8	295.2	336.6	336.6	329.9
70°	212.4	249.8	284.5	293.8	279.1
72.5°	162.9	205.7	243.1	243.1	229.7
75°	120.2	164.3	201.7	195.0	188.3
77.5°	80.1	122.9	150.9	152.3	146.9
80°	48.1	84.1	108.2	112.2	105.5
82.5°	25.4	56.1	73.5	73.5	69.5
85°	12.0	30.7	42.7	40.1	36.1
87.5°	5.3	17.4	20.0	18.7	14.7
90°	0.0	10.7	12.0	10.7	8.0
92.5°	0.0	9.3	12.0	10.7	8.0
95°	0.0	6.7	12.0	10.7	8.0
97.5°	0.0	5.3	10.7	10.7	9.3
100°	0.0	4.0	9.3	9.3	9.3
102.5°	0.0	2.7	8.0	9.3	8.0
105°	1.3	2.7	6.7	8.0	8.0
107.5°	1.3	2.7	5.3	6.7	6.7
110°	1.3	2.7	4.0	5.3	6.7



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	1.3	2.7	4.0	5.3	5.3
115°	1.3	1.3	4.0	4.0	5.3
117.5°	1.3	2.7	4.0	4.0	5.3
120°	1.3	1.3	2.7	4.0	5.3
122.5°	1.3	1.3	2.7	4.0	5.3
125°	1.3	1.3	2.7	4.0	4.0
127.5°	2.7	1.3	2.7	4.0	4.0
130°	2.7	1.3	2.7	2.7	4.0
132.5°	2.7	1.3	2.7	2.7	4.0
135°	2.7	1.3	2.7	2.7	4.0
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)