

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: P239267

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

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P239267
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-LO-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

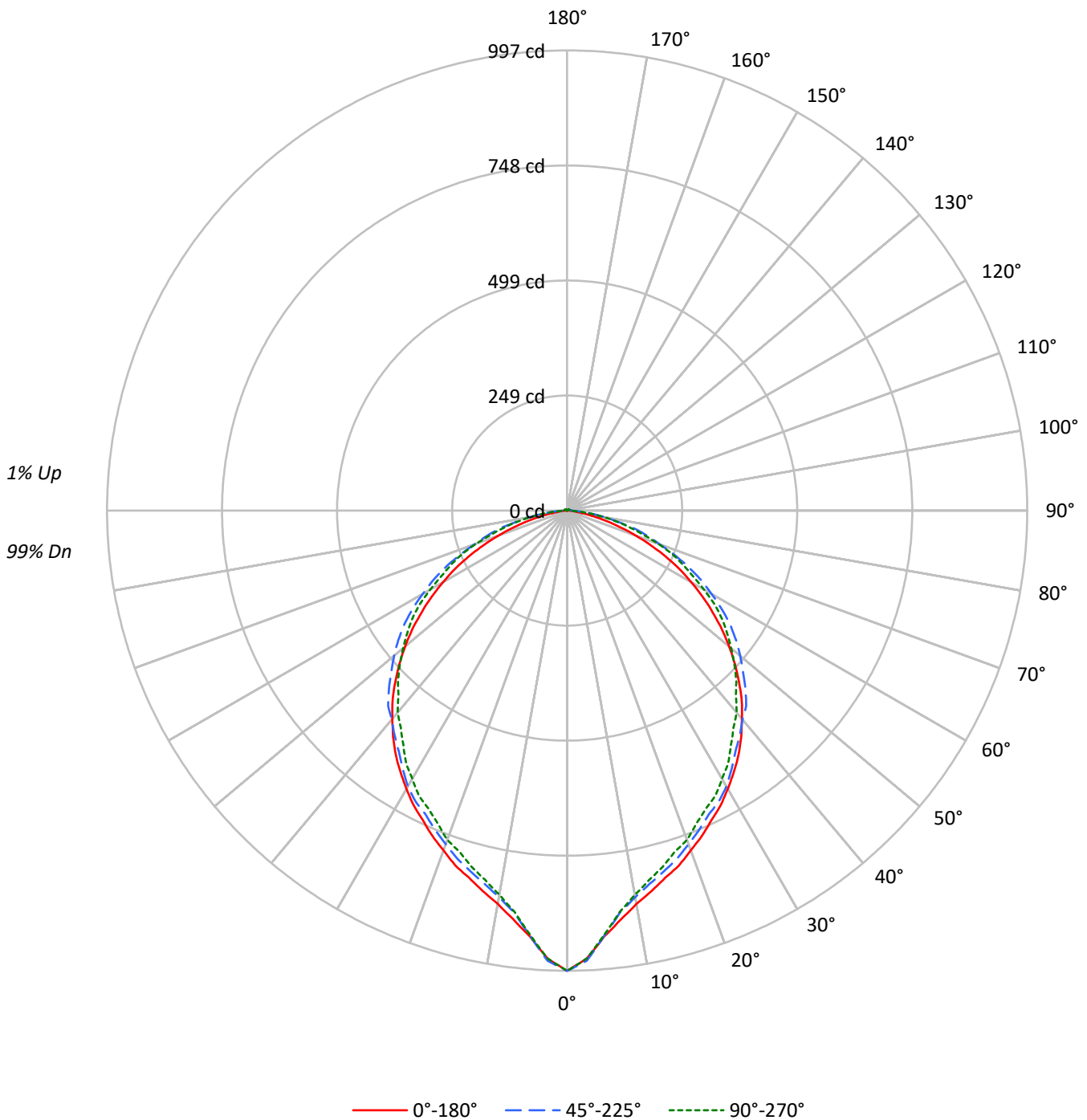
Lumens per Lamp: N/A
Luminaire Lumens: 2292.0 lumens
Efficiency: N/A
Efficacy: 98.4 lumens/watt
Spacing Criteria (0/90/45): 1.05 / 1.01 / 1.23
Luminous Opening: Rectangular (W 0.58' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 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

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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°	9200	9200	9200
5°	8578	8559	8541
10°	8106	7965	7918
15°	7862	7728	7633
20°	7689	7551	7453
25°	7534	7392	7249
30°	7416	7352	7150
35°	7288	7164	6973
40°	7095	7119	6878
45°	6878	7125	6760
50°	6575	7020	6661
55°	6194	6934	6597
60°	5722	6663	6313
65°	5130	6355	6047
70°	4289	5746	5638
75°	3208	5383	5026
80°	1913	4304	4197
85°	953	3387	2858



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	86.0	3.8
10°-20°	229.1	10.0
20°-30°	335.5	14.6
30°-40°	398.3	17.4
40°-50°	411.4	18.0
50°-60°	369.8	16.1
60°-70°	270.0	11.8
70°-80°	141.6	6.2
80°-90°	33.8	1.5
90°-100°	6.8	0.3
100°-110°	4.3	0.2
110°-120°	2.6	0.1
120°-130°	1.9	0.1
130°-140°	0.9	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°	650.6	28.4
0°-40°	1048.9	45.8
0°-60°	1830.1	79.8
0°-90°	2275.5	99.3
90°-120°	13.7	0.6
90°-150°	16.5	0.7
90°-180°	16.0	0.7
0°-180°	2292.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	997	997	997	997	997	
5°	926	928	924	917	922	87
15°	823	822	809	809	799	233
25°	740	731	726	722	712	342
35°	647	644	636	630	619	404
45°	527	537	546	529	518	406
55°	385	408	431	422	410	344
65°	235	258	291	285	277	232
75°	90	123	151	146	141	97
85°	9	23	32	30	27	13
90°	0	8	9	8	6	1
95°	0	5	9	8	6	0
105°	1	2	5	6	6	1
115°	1	1	3	3	4	1
125°	1	1	2	3	3	1
135°	2	1	2	2	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



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	997.2	997.2	997.2	997.2	997.2
2.5°	971.2	976.2	976.2	973.2	971.2
5°	926.2	928.2	924.2	917.2	922.2
7.5°	893.2	889.2	878.2	871.2	876.2
10°	865.2	861.2	850.2	840.2	845.2
12.5°	844.2	842.2	828.1	822.1	820.1
15°	823.1	822.1	809.1	809.1	799.1
17.5°	806.1	803.1	791.1	787.1	775.1
20°	783.1	783.1	769.1	761.1	759.1
22.5°	763.1	751.1	748.1	743.1	733.1
25°	740.1	731.1	726.1	722.1	712.1
27.5°	720.1	710.1	711.1	700.1	696.1
30°	696.1	689.1	690.1	678.1	671.1
32.5°	672.1	667.1	663.1	656.1	649.1
35°	647.1	644.1	636.1	630.1	619.1
37.5°	619.1	619.1	614.1	608.1	592.1
40°	589.1	589.1	591.1	578.1	571.1
42.5°	560.1	563.1	574.1	558.1	541.1
45°	527.1	537.1	546.1	529.1	518.1
47.5°	493.1	506.1	517.1	506.1	491.1
50°	458.1	478.1	489.1	477.1	464.1
52.5°	423.1	443.1	461.1	451.1	437.1
55°	385.1	408.1	431.1	422.1	410.1
57.5°	349.1	375.1	397.1	391.1	379.1
60°	310.1	337.1	361.1	356.1	342.1
62.5°	274.0	298.1	328.1	321.1	307.1
65°	235.0	258.0	291.1	285.1	277.0
67.5°	196.0	221.0	252.0	252.0	247.0
70°	159.0	187.0	213.0	220.0	209.0
72.5°	122.0	154.0	182.0	182.0	172.0
75°	90.0	123.0	151.0	146.0	141.0
77.5°	60.0	92.0	113.0	114.0	110.0
80°	36.0	63.0	81.0	84.0	79.0
82.5°	19.0	42.0	55.0	55.0	52.0
85°	9.0	23.0	32.0	30.0	27.0
87.5°	4.0	13.0	15.0	14.0	11.0
90°	0.0	8.0	9.0	8.0	6.0
92.5°	0.0	7.0	9.0	8.0	6.0
95°	0.0	5.0	9.0	8.0	6.0
97.5°	0.0	4.0	8.0	8.0	7.0
100°	0.0	3.0	7.0	7.0	7.0
102.5°	0.0	2.0	6.0	7.0	6.0
105°	1.0	2.0	5.0	6.0	6.0
107.5°	1.0	2.0	4.0	5.0	5.0
110°	1.0	2.0	3.0	4.0	5.0



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	1.0	2.0	3.0	4.0	4.0
115°	1.0	1.0	3.0	3.0	4.0
117.5°	1.0	2.0	3.0	3.0	4.0
120°	1.0	1.0	2.0	3.0	4.0
122.5°	1.0	1.0	2.0	3.0	4.0
125°	1.0	1.0	2.0	3.0	3.0
127.5°	2.0	1.0	2.0	3.0	3.0
130°	2.0	1.0	2.0	2.0	3.0
132.5°	2.0	1.0	2.0	2.0	3.0
135°	2.0	1.0	2.0	2.0	3.0
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)