

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: P239261

Luminaire Tested: **HDF-2-LD4-UNV-2-STD-30-IK12-EDC-1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P239261
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-30-IK12-EDC-1
Description: FAILSAFE HDF LED FIXTURE
2FT, 2-ROW LED BOARDS, CLEAR LENS
Light Source: (84) 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

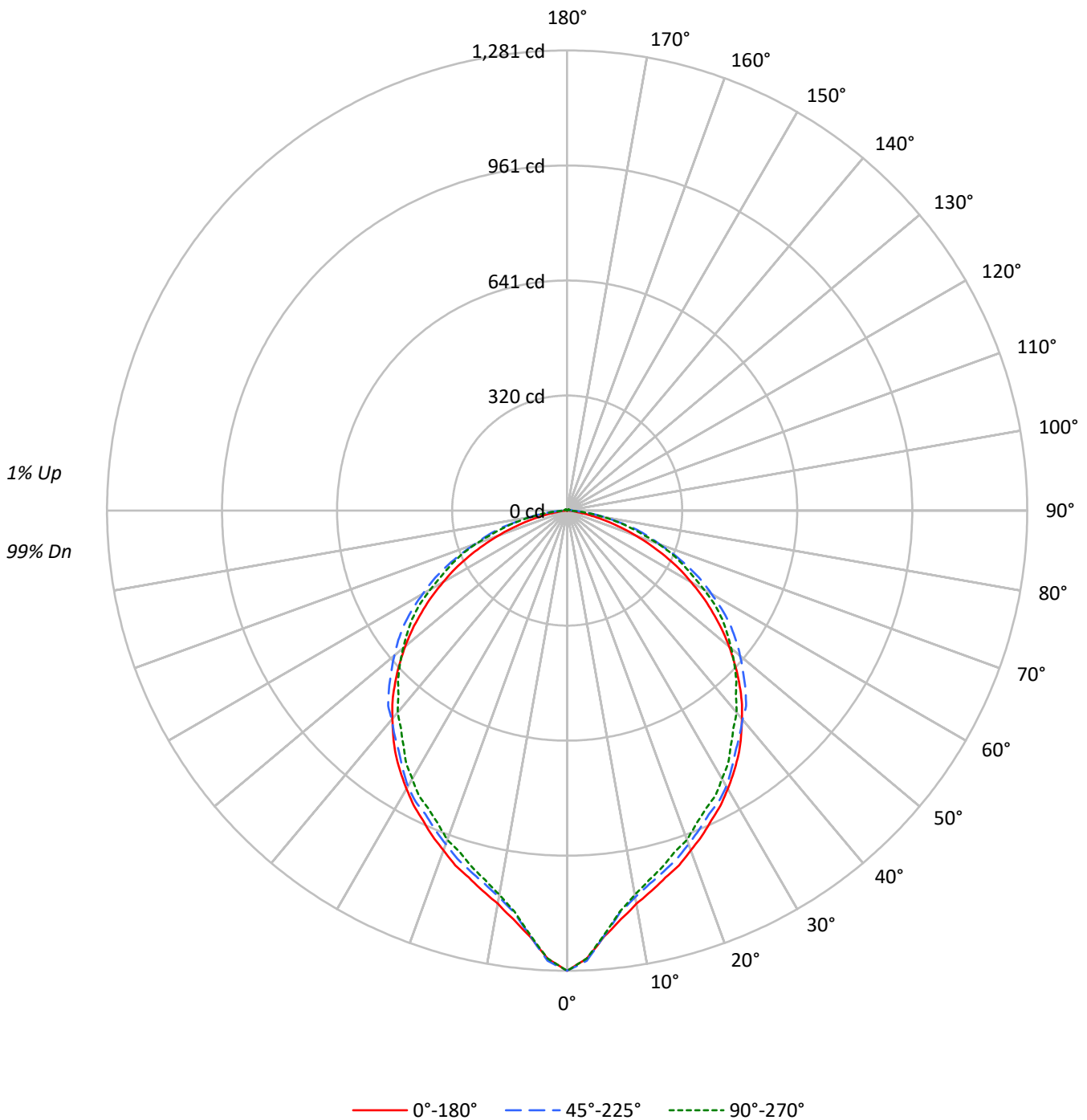
Lumens per Lamp: N/A
Luminaire Lumens: 2944.5 lumens
Efficiency: N/A
Efficacy: 88.7 lumens/watt
Spacing Criteria (0/90/45): 1.05 / 1.01 / 1.23
Luminous Opening: Rectangular (W 0.58' x L: 2' x H: 0')
CIE Type: Direct

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	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	96	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°	11819	11819	11819
5°	11019	10995	10972
10°	10412	10232	10171
15°	10101	9929	9806
20°	9878	9701	9575
25°	9679	9496	9313
30°	9527	9445	9185
35°	9363	9204	8958
40°	9115	9146	8837
45°	8835	9153	8685
50°	8447	9018	8558
55°	7957	8908	8474
60°	7350	8558	8108
65°	6591	8163	7770
70°	5511	7383	7243
75°	4121	6916	6459
80°	2460	5531	5393
85°	1228	4351	3673



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	110.4	3.7
10°-20°	294.3	10.0
20°-30°	431.1	14.6
30°-40°	511.7	17.4
40°-50°	528.5	18.0
50°-60°	475.0	16.1
60°-70°	346.8	11.8
70°-80°	181.9	6.2
80°-90°	43.4	1.5
90°-100°	8.8	0.3
100°-110°	5.5	0.2
110°-120°	3.4	0.1
120°-130°	2.4	0.1
130°-140°	1.2	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°	835.8	28.4
0°-40°	1347.5	45.8
0°-60°	2351.1	79.8
0°-90°	2923.3	99.3
90°-120°	17.6	0.6
90°-150°	21.2	0.7
90°-180°	21.0	0.7
0°-180°	2944.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1281	1281	1281	1281	1281	
5°	1190	1192	1187	1178	1185	111
15°	1058	1056	1040	1040	1027	299
25°	951	939	933	928	915	439
35°	831	828	817	810	795	519
45°	677	690	702	680	666	521
55°	495	524	554	542	527	442
65°	302	332	374	366	356	298
75°	116	158	194	188	181	125
85°	12	30	41	38	35	17
90°	0	10	12	10	8	1
95°	0	6	12	10	8	0
105°	1	3	6	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°	1281.0	1281.0	1281.0	1281.0	1281.0
2.5°	1247.6	1254.0	1254.0	1250.2	1247.6
5°	1189.8	1192.4	1187.2	1178.2	1184.7
7.5°	1147.4	1142.3	1128.1	1119.1	1125.6
10°	1111.4	1106.3	1092.2	1079.3	1085.7
12.5°	1084.4	1081.9	1063.9	1056.2	1053.6
15°	1057.5	1056.2	1039.5	1039.5	1026.6
17.5°	1035.6	1031.8	1016.3	1011.2	995.8
20°	1006.1	1006.1	988.1	977.8	975.2
22.5°	980.4	964.9	961.1	954.7	941.8
25°	950.8	939.3	932.8	927.7	914.8
27.5°	925.1	912.3	913.6	899.4	894.3
30°	894.3	885.3	886.6	871.2	862.2
32.5°	863.4	857.0	851.9	842.9	833.9
35°	831.3	827.5	817.2	809.5	795.3
37.5°	795.3	795.3	788.9	781.2	760.7
40°	756.8	756.8	759.4	742.7	733.7
42.5°	719.5	723.4	737.5	717.0	695.1
45°	677.1	690.0	701.5	679.7	665.6
47.5°	633.4	650.2	664.3	650.2	630.9
50°	588.5	614.2	628.3	612.9	596.2
52.5°	543.5	569.2	592.3	579.5	561.5
55°	494.7	524.2	553.8	542.2	526.8
57.5°	448.4	481.8	510.1	502.4	487.0
60°	398.3	433.0	463.8	457.4	439.4
62.5°	352.1	382.9	421.4	412.4	394.5
65°	301.9	331.5	373.9	366.2	355.9
67.5°	251.8	284.0	323.8	323.8	317.4
70°	204.3	240.3	273.7	282.7	268.5
72.5°	156.8	197.9	233.8	233.8	221.0
75°	115.6	158.0	194.0	187.6	181.2
77.5°	77.1	118.2	145.2	146.5	141.3
80°	46.3	80.9	104.1	107.9	101.5
82.5°	24.4	54.0	70.7	70.7	66.8
85°	11.6	29.6	41.1	38.5	34.7
87.5°	5.1	16.7	19.3	18.0	14.1
90°	0.0	10.3	11.6	10.3	7.7
92.5°	0.0	9.0	11.6	10.3	7.7
95°	0.0	6.4	11.6	10.3	7.7
97.5°	0.0	5.1	10.3	10.3	9.0
100°	0.0	3.9	9.0	9.0	9.0
102.5°	0.0	2.6	7.7	9.0	7.7
105°	1.3	2.6	6.4	7.7	7.7
107.5°	1.3	2.6	5.1	6.4	6.4
110°	1.3	2.6	3.9	5.1	6.4



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	1.3	2.6	3.9	5.1	5.1
115°	1.3	1.3	3.9	3.9	5.1
117.5°	1.3	2.6	3.9	3.9	5.1
120°	1.3	1.3	2.6	3.9	5.1
122.5°	1.3	1.3	2.6	3.9	5.1
125°	1.3	1.3	2.6	3.9	3.9
127.5°	2.6	1.3	2.6	3.9	3.9
130°	2.6	1.3	2.6	2.6	3.9
132.5°	2.6	1.3	2.6	2.6	3.9
135°	2.6	1.3	2.6	2.6	3.9
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)