

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: P239273

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

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P239273
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-STD-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

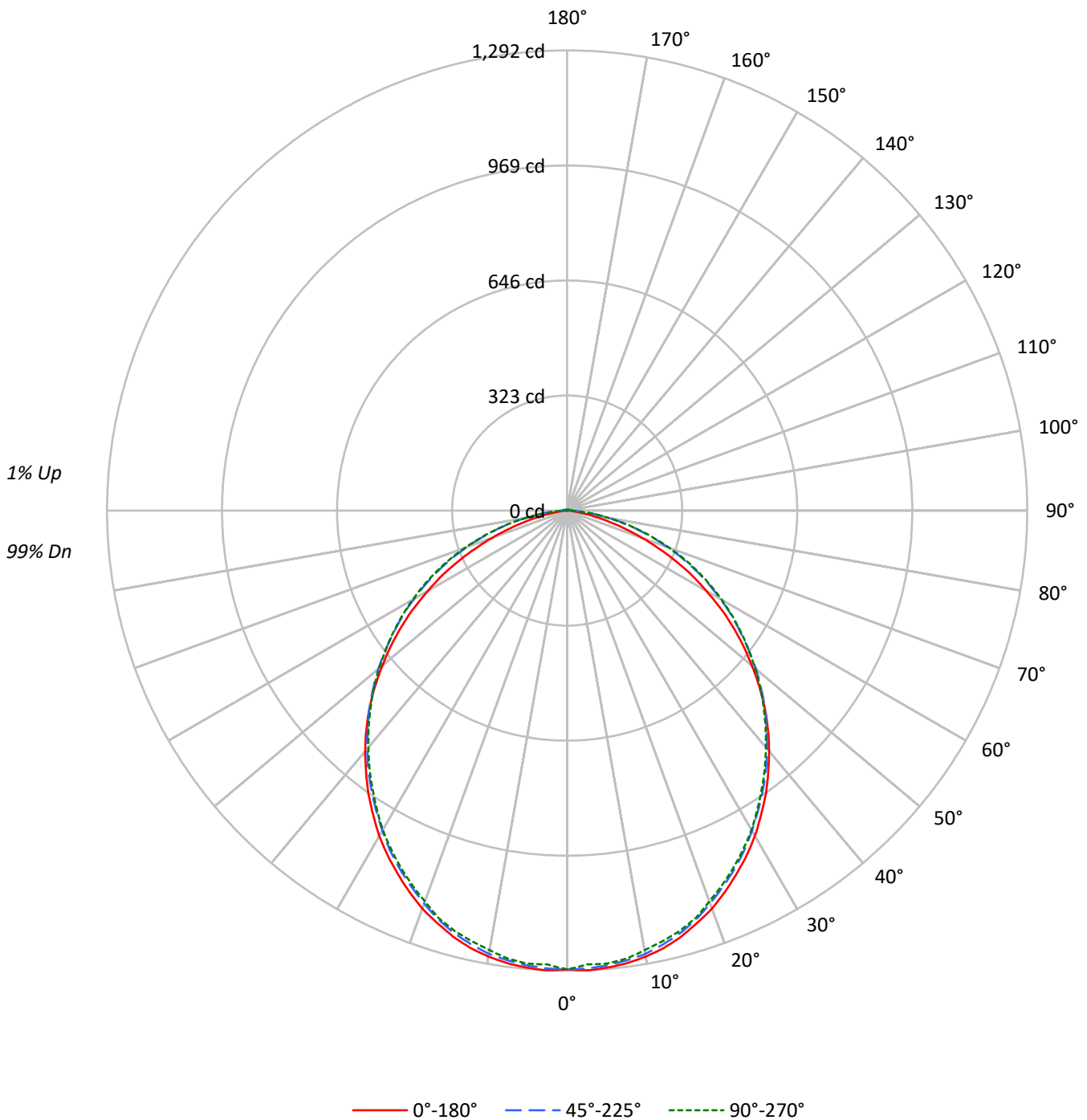
Lumens per Lamp: N/A
Luminaire Lumens: 3365.9 lumens
Efficiency: N/A
Efficacy: 101.4 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.2 / 1.32
Luminous Opening: Rectangular (W 0.58' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 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	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°	11886	11886	11886
5°	11932	11872	11825
10°	11913	11841	11744
15°	11827	11729	11667
20°	11678	11527	11464
25°	11455	11311	11258
30°	11235	11057	11030
35°	10951	10792	10735
40°	10628	10519	10458
45°	10240	10240	10173
50°	9716	9937	9882
55°	9132	9545	9587
60°	8320	9173	9243
65°	7375	8722	8833
70°	6064	8074	8211
75°	4442	7326	7418
80°	2593	6211	6211
85°	1355	5028	4626



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	121.8	3.6
10°-20°	346.1	10.3
20°-30°	512.5	15.2
30°-40°	600.4	17.8
40°-50°	603.9	17.9
50°-60°	525.9	15.6
60°-70°	381.7	11.3
70°-80°	200.9	6.0
80°-90°	50.3	1.5
90°-100°	9.9	0.3
100°-110°	5.7	0.2
110°-120°	3.3	0.1
120°-130°	2.3	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°	980.4	29.1
0°-40°	1580.8	47.0
0°-60°	2710.6	80.5
0°-90°	3343.5	99.3
90°-120°	18.8	0.6
90°-150°	22.4	0.7
90°-180°	22.0	0.7
0°-180°	3365.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1288	1288	1288	1288	1288	
5°	1288	1286	1282	1277	1277	122
15°	1238	1234	1228	1224	1222	349
25°	1125	1118	1111	1107	1106	519
35°	972	963	958	956	953	608
45°	785	781	785	784	780	604
55°	568	577	593	600	596	506
65°	338	366	400	407	405	334
75°	125	172	206	211	208	136
85°	13	37	48	48	44	18
90°	0	12	14	12	9	1
95°	0	8	13	12	9	0
105°	1	3	6	8	6	1
115°	1	3	4	4	4	1
125°	1	3	3	4	4	1
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



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1288.3	1288.3	1288.3	1288.3	1288.3
2.5°	1292.2	1292.2	1287.0	1279.3	1275.5
5°	1288.3	1285.8	1281.9	1276.8	1276.8
7.5°	1281.9	1279.3	1274.2	1269.1	1269.1
10°	1271.6	1269.1	1263.9	1256.2	1253.6
12.5°	1257.5	1254.9	1247.2	1240.8	1238.2
15°	1238.2	1234.4	1228.0	1224.1	1221.5
17.5°	1213.8	1211.3	1203.6	1199.7	1199.7
20°	1189.4	1183.0	1174.0	1170.2	1167.6
22.5°	1158.6	1152.2	1143.2	1138.0	1138.0
25°	1125.2	1117.5	1111.1	1107.2	1105.9
27.5°	1091.8	1081.5	1076.4	1072.5	1071.3
30°	1054.6	1044.3	1037.9	1035.3	1035.3
32.5°	1013.5	1004.5	998.0	995.5	994.2
35°	972.3	963.4	958.2	955.7	953.1
37.5°	927.4	919.7	917.1	915.8	912.0
40°	882.4	874.7	873.4	872.2	868.3
42.5°	834.9	829.8	828.5	829.8	824.6
45°	784.8	781.0	784.8	783.5	779.7
47.5°	732.2	732.2	738.6	739.9	736.0
50°	676.9	682.1	692.3	694.9	688.5
52.5°	623.0	629.4	642.2	647.4	642.2
55°	567.7	576.7	593.4	599.9	596.0
57.5°	511.2	524.1	547.2	553.6	549.8
60°	450.9	470.1	497.1	506.1	500.9
62.5°	396.9	418.7	448.3	456.0	453.4
65°	337.8	366.1	399.5	407.2	404.6
67.5°	280.0	313.4	349.4	358.4	355.8
70°	224.8	263.3	299.3	308.3	304.4
72.5°	172.1	215.8	251.8	259.5	255.6
75°	124.6	172.1	205.5	210.7	208.1
77.5°	82.2	131.0	159.3	165.7	161.8
80°	48.8	93.8	116.9	120.7	116.9
82.5°	25.7	62.9	79.6	80.9	77.1
85°	12.8	37.2	47.5	47.5	43.7
87.5°	5.1	19.3	23.1	21.8	19.3
90°	0.0	11.6	14.1	11.6	9.0
92.5°	0.0	10.3	12.8	11.6	7.7
95°	0.0	7.7	12.8	11.6	9.0
97.5°	0.0	6.4	11.6	11.6	9.0
100°	0.0	3.9	10.3	10.3	9.0
102.5°	0.0	3.9	7.7	9.0	7.7
105°	1.3	2.6	6.4	7.7	6.4
107.5°	1.3	2.6	5.1	6.4	6.4
110°	1.3	2.6	5.1	5.1	5.1



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CANDELA DISTRIBUTION (continued):

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