

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: P239206

Luminaire Tested: **HDF-4-LD4-UNV-2-LO-35-OPL-EDC-1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P239206
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1711-412-5)
Test Lab: INNOVATION CENTER(G2)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: HDF-4-LD4-UNV-2-LO-35-OPL-EDC-1
Description: FAILSAFE HDF LED FIXTURE
4FT, 2-ROW LED BOARDS, OPAL LENS
Light Source: (168) 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

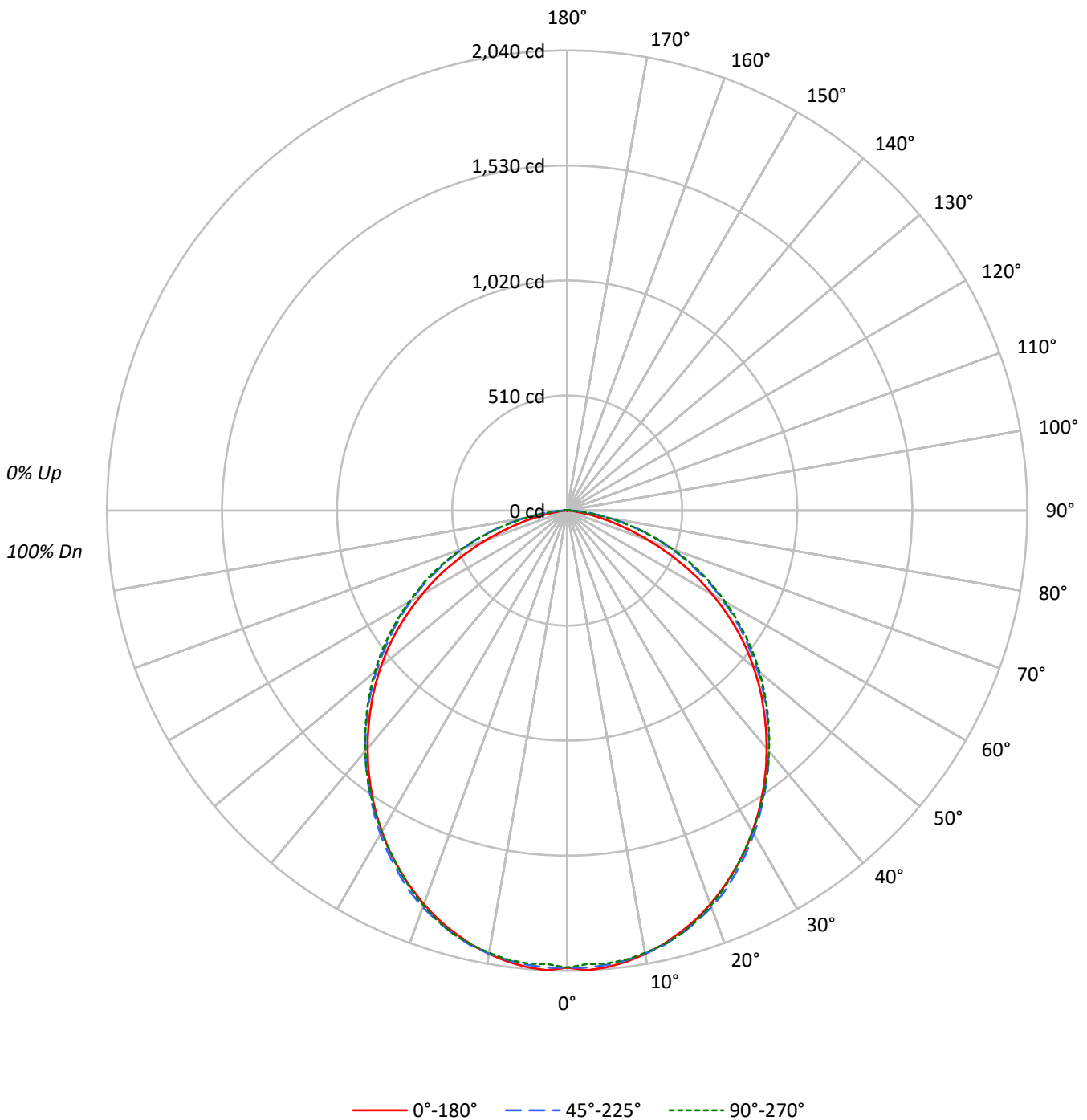
Lumens per Lamp: N/A
Luminaire Lumens: 5357.1 lumens
Efficiency: N/A
Efficacy: 113.5 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.21 / 1.32
Luminous Opening: Rectangular (W 0.58' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 47.2
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	102	102	102	100
1	109	104	100	96	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	70
3	91	80	72	66	88	79	71	65	76	69	64	73	67	63	70	66	62	60
4	83	71	63	56	81	70	62	56	67	60	55	65	59	54	63	58	53	51
5	77	64	55	48	74	63	54	48	61	53	48	59	52	47	57	51	46	44
6	71	58	49	42	69	57	48	42	55	47	42	53	46	41	51	46	41	39
7	66	52	44	38	64	51	43	37	50	42	37	48	42	37	47	41	36	34
8	61	48	39	34	60	47	39	33	46	38	33	44	38	33	43	37	33	31
9	57	44	36	30	56	43	35	30	42	35	30	41	34	30	40	34	30	28
10	54	41	33	27	52	40	32	27	39	32	27	38	32	27	37	31	27	25

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9346	9346	9346
5°	9410	9363	9336
10°	9350	9340	9326
15°	9246	9284	9284
20°	9116	9185	9146
25°	8943	9014	8953
30°	8752	8821	8757
35°	8526	8594	8577
40°	8286	8377	8383
45°	8024	8155	8188
50°	7744	7916	7988
55°	7375	7649	7753
60°	6864	7372	7473
65°	6156	6997	7161
70°	5166	6623	6690
75°	3903	6042	5935
80°	2417	5101	4808
85°	1164	3864	3282



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	191.7	3.6
10°-20°	545.9	10.2
20°-30°	810.3	15.1
30°-40°	950.2	17.7
40°-50°	959.6	17.9
50°-60°	843.1	15.7
60°-70°	620.3	11.6
70°-80°	331.0	6.2
80°-90°	79.7	1.5
90°-100°	12.4	0.2
100°-110°	6.3	0.1
110°-120°	3.1	0.1
120°-130°	2.2	0.0
130°-140°	1.0	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°	1548.0	28.9
0°-40°	2498.2	46.6
0°-60°	4300.9	80.3
0°-90°	5331.9	99.5
90°-120°	21.9	0.4
90°-150°	25.1	0.5
90°-180°	25.0	0.5
0°-180°	5357.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2026	2026	2026	2026	2026	
5°	2032	2010	2022	2015	2016	193
15°	1936	1923	1944	1941	1944	546
25°	1757	1753	1771	1756	1759	809
35°	1514	1516	1526	1515	1523	947
45°	1230	1235	1250	1248	1255	949
55°	917	924	951	959	964	818
65°	564	600	641	654	656	558
75°	219	291	339	339	333	238
85°	22	66	73	67	62	32
90°	0	17	18	15	13	1
95°	0	10	16	14	13	0
105°	1	3	7	9	9	1
115°	1	2	3	4	4	1
125°	2	2	3	3	3	2
135°	2	2	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°	2026	2026	2026	2026	2026
2.5°	2040	2018	2028	2022	2012
5°	2032	2010	2022	2015	2016
7.5°	2017	1998	2011	2006	2008
10°	1996	1978	1994	1990	1991
12.5°	1969	1953	1974	1969	1971
15°	1936	1923	1944	1941	1944
17.5°	1900	1889	1910	1905	1907
20°	1857	1848	1871	1859	1863
22.5°	1809	1803	1826	1811	1814
25°	1757	1753	1771	1756	1759
27.5°	1704	1698	1715	1699	1701
30°	1643	1641	1656	1639	1644
32.5°	1581	1581	1592	1578	1585
35°	1514	1516	1526	1515	1523
37.5°	1447	1449	1461	1451	1459
40°	1376	1379	1391	1385	1392
42.5°	1304	1309	1322	1318	1324
45°	1230	1235	1250	1248	1255
47.5°	1156	1160	1177	1179	1185
50°	1079	1082	1103	1108	1113
52.5°	1000	1004	1026	1034	1040
55°	917	924	951	959	964
57.5°	830	844	875	882	886
60°	744	760	799	808	810
62.5°	657	682	724	732	734
65°	564	600	641	654	656
67.5°	472	520	566	576	576
70°	383	441	491	497	496
72.5°	299	365	414	419	417
75°	219	291	339	339	333
77.5°	148	223	263	261	257
80°	91	163	192	187	181
82.5°	49	112	127	121	115
85°	22	66	73	67	62
87.5°	6	34	34	30	28
90°	0	17	18	15	13
92.5°	0	13	17	14	13
95°	0	10	16	14	13
97.5°	0	7	14	13	12
100°	0	5	11	12	11
102.5°	0	4	9	10	10
105°	1	3	7	9	9
107.5°	1	3	5	7	7
110°	1	2	4	6	6



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	1	2	4	5	5
115°	1	2	3	4	4
117.5°	1	2	3	4	4
120°	2	2	3	3	3
122.5°	2	2	3	3	3
125°	2	2	3	3	3
127.5°	2	2	2	3	3
130°	2	2	2	2	3
132.5°	2	2	2	2	2
135°	2	2	2	2	3
137.5°	0	0	0	0	0
140°	0	0	0	0	0
142.5°	0	0	0	0	0
145°	0	0	0	0	0
147.5°	0	0	0	0	0
150°	0	0	0	0	0
152.5°	0	0	0	0	0
155°	0	0	0	0	0
157.5°	0	0	0	0	0
160°	0	0	0	0	0
162.5°	0	0	0	0	0
165°	0	0	0	0	0
167.5°	0	0	0	0	0
170°	0	0	0	0	0
172.5°	0	0	0	0	0
175°	0	0	0	0	0
177.5°	0	0	0	0	0
180°	0	0	0	0	0

(END OF REPORT)