

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: P239182

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

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P239182
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1711-412-3)
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-EDC-1
Description: FAILSAFE HDF LED FIXTURE
4FT, 2-ROW LED BOARDS, NON-OVERLAY
Light Source: (168) 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

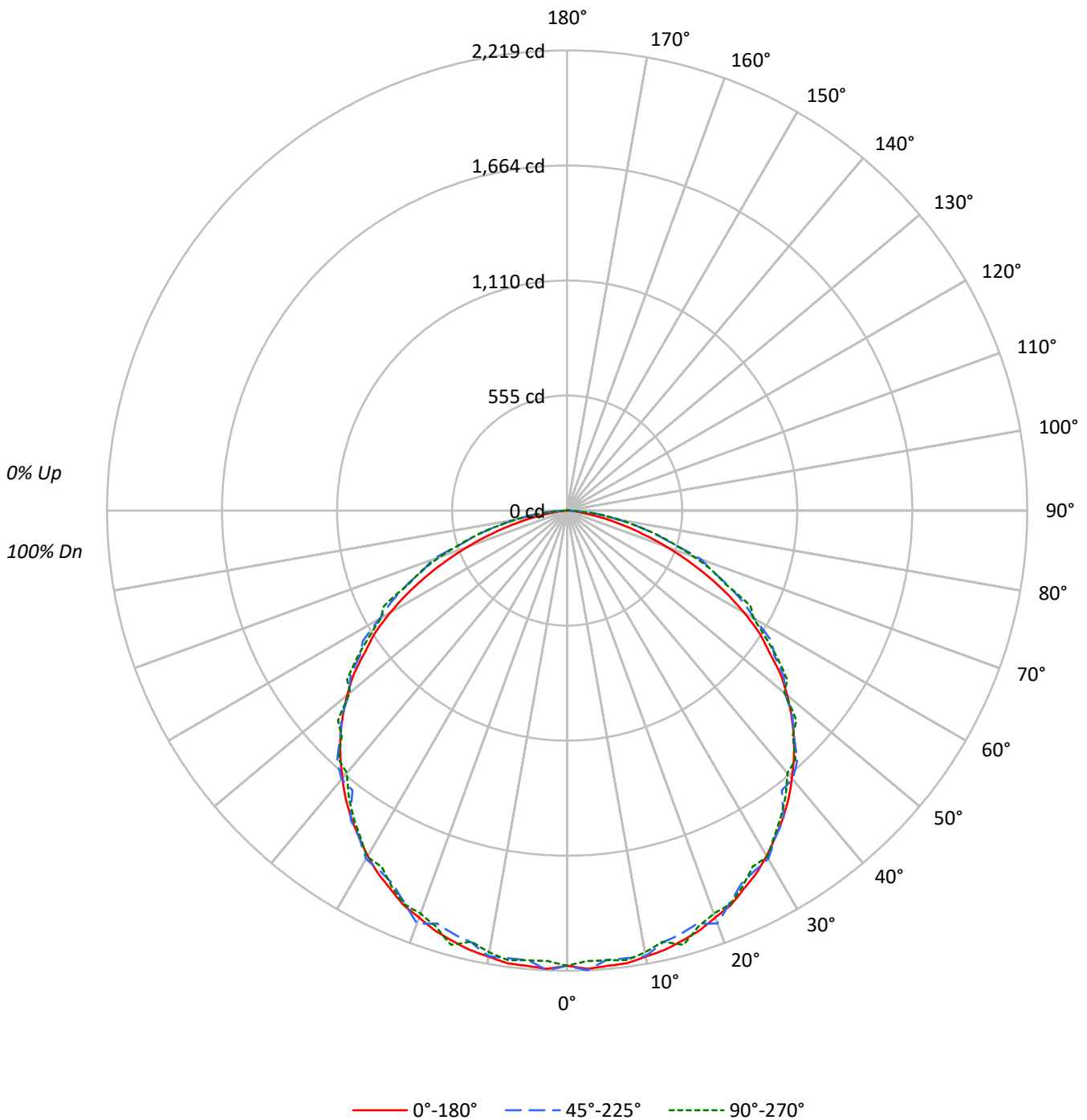
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6516.9 lumens
Efficiency: N/A
Efficacy: 138.1 lumens/watt
Spacing Criteria (0/90/45): 1.3 / 1.29 / 1.41
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	94	97	94	91	93	91	88	90	88	86	83
2	99	90	84	78	96	89	82	77	85	80	75	82	77	73	78	75	72	69
3	90	79	71	64	87	78	70	64	75	68	63	72	66	62	69	64	60	58
4	82	70	61	54	80	69	60	54	66	59	53	64	58	52	62	56	52	50
5	75	62	53	47	73	61	53	46	59	52	46	57	51	45	55	49	45	43
6	70	56	47	41	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	65	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	42	34	29	55	42	34	29	41	33	28	40	33	28	39	32	28	26
10	52	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	25	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10121	10121	10121
5°	10206	10072	10081
10°	10230	10221	10132
15°	10254	10096	10354
20°	10250	10403	10152
25°	10251	10109	10185
30°	10243	10334	10270
35°	10210	10244	10131
40°	10153	10183	9948
45°	10093	10099	10027
50°	9940	9846	9811
55°	9571	9812	9941
60°	9097	9623	9558
65°	8187	9366	9224
70°	6879	9280	8821
75°	5205	7878	7985
80°	3108	6615	6934
85°	1376	5663	4605



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	208.2	3.2
10°-20°	600.3	9.2
20°-30°	919.1	14.1
30°-40°	1124.9	17.3
40°-50°	1189.8	18.3
50°-60°	1087.8	16.7
60°-70°	820.2	12.6
70°-80°	440.4	6.8
80°-90°	106.2	1.6
90°-100°	8.9	0.1
100°-110°	4.9	0.1
110°-120°	3.1	0.0
120°-130°	2.0	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°	1727.6	26.5
0°-40°	2852.5	43.8
0°-60°	5130.1	78.7
0°-90°	6496.9	99.7
90°-120°	16.9	0.3
90°-150°	20.0	0.3
90°-180°	20.0	0.3
0°-180°	6516.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2194	2194	2194	2194	2194	
5°	2204	2200	2175	2183	2177	210
15°	2147	2113	2114	2155	2168	606
25°	2014	1985	1986	1991	2001	930
35°	1813	1821	1819	1800	1799	1134
45°	1547	1553	1548	1558	1537	1191
55°	1190	1169	1220	1241	1236	1067
65°	750	788	858	880	845	740
75°	292	385	442	453	448	315
85°	26	84	107	97	87	40
90°	0	16	14	12	10	1
95°	0	9	10	9	7	0
105°	0	3	6	6	5	0
115°	1	2	4	4	4	1
125°	1	1	3	3	3	1
135°	2	2	2	2	2	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°	2194	2194	2194	2194	2194
2.5°	2212	2193	2219	2198	2174
5°	2204	2200	2175	2183	2177
7.5°	2202	2160	2177	2188	2186
10°	2184	2154	2182	2140	2163
12.5°	2170	2140	2133	2102	2129
15°	2147	2113	2114	2155	2168
17.5°	2123	2103	2088	2103	2103
20°	2088	2059	2119	2044	2068
22.5°	2060	2007	2048	2032	2054
25°	2014	1985	1986	1991	2001
27.5°	1974	1916	1958	1964	1936
30°	1923	1872	1940	1855	1928
32.5°	1868	1861	1867	1857	1860
35°	1813	1821	1819	1800	1799
37.5°	1754	1729	1700	1723	1731
40°	1686	1652	1691	1672	1652
42.5°	1618	1588	1641	1578	1630
45°	1547	1553	1548	1558	1537
47.5°	1468	1479	1474	1456	1499
50°	1385	1385	1372	1417	1367
52.5°	1297	1314	1317	1284	1337
55°	1190	1169	1220	1241	1236
57.5°	1099	1103	1167	1153	1132
60°	986	1045	1043	1032	1036
62.5°	870	904	958	940	997
65°	750	788	858	880	845
67.5°	628	690	751	748	759
70°	510	598	688	645	654
72.5°	396	487	535	572	541
75°	292	385	442	453	448
77.5°	197	292	344	348	343
80°	117	215	249	269	261
82.5°	60	142	180	179	174
85°	26	84	107	97	87
87.5°	8	45	35	22	18
90°	0	16	14	12	10
92.5°	0	11	11	10	8
95°	0	9	10	9	7
97.5°	0	7	9	8	7
100°	0	5	8	8	6
102.5°	0	4	7	7	6
105°	0	3	6	6	5
107.5°	0	3	5	6	5
110°	1	2	5	5	5



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	1	2	4	5	4
115°	1	2	4	4	4
117.5°	1	2	3	4	4
120°	1	2	3	3	3
122.5°	1	2	3	3	3
125°	1	1	3	3	3
127.5°	1	1	2	3	3
130°	2	1	2	3	3
132.5°	2	1	2	2	3
135°	2	2	2	2	2
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)