

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: P26878

Luminaire Tested: **FMS-12-4-LD4-2STD-80/84**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P26878
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FMS-12-4-LD4-2STD-80/84
Description: FAILSAFE SURFACE MOUNT CORRECTIONAL LED 1X4 FIXTURE
Light Source: (168) NICHIA 4000K LEDS
2UT217042A8404A
Ballast/Driver: (2) OSRAM ELECTRONIC DRIVER
OT50W

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5906.0 lumens
Efficiency: N/A
Efficacy: 86.6 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.16 / 1.3
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

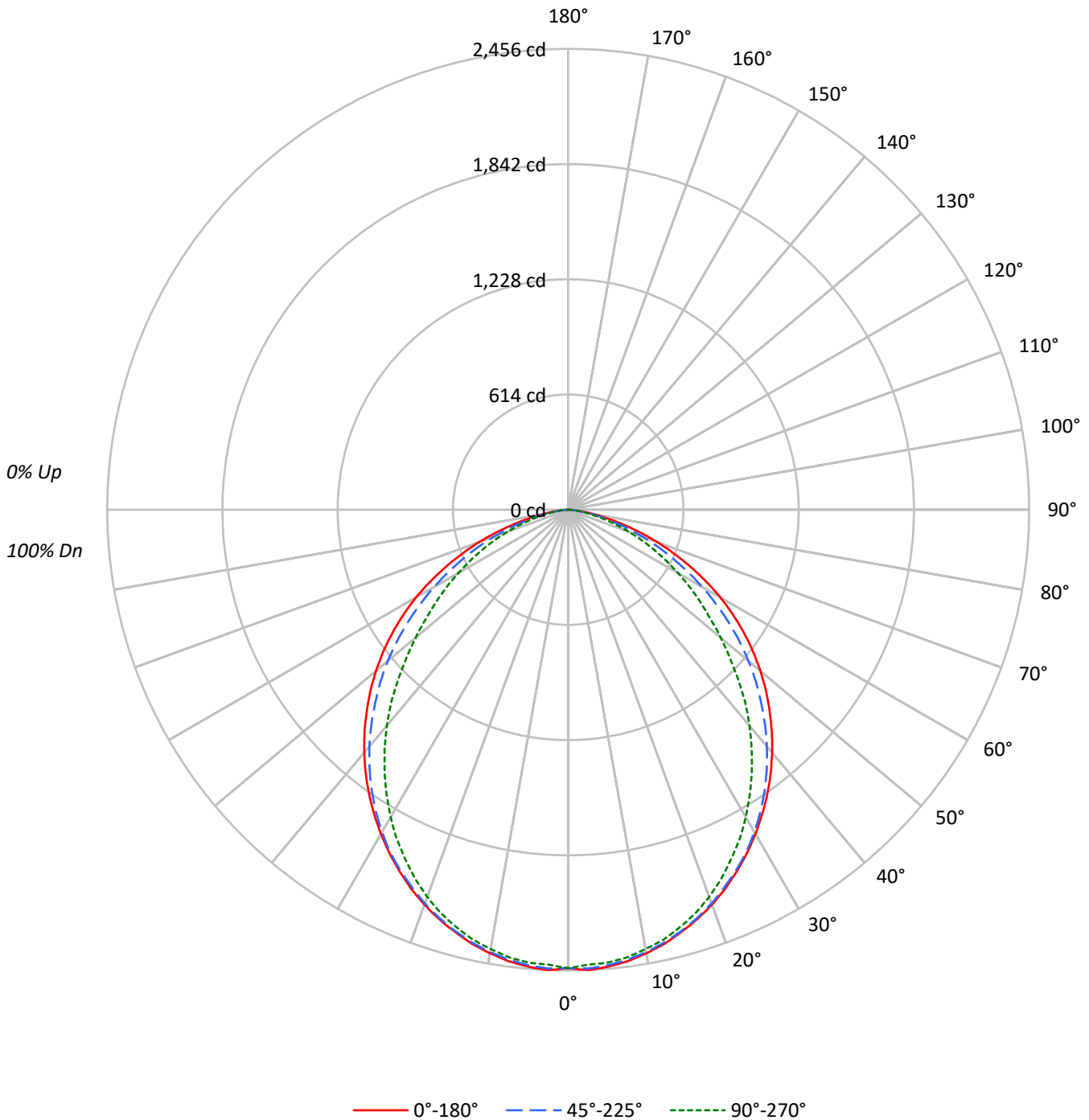
Input Watts (W): 68.2
Input Voltage (V): 120.00
Input Current (Ain): 0.57095
Voltage Rise (V): NR
Power Factor: 0.9983
Total Harmonic Distortion (THDi): 7.94%
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: 24 HR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	102	102	102	100					100			
1	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88					86				
2	101	93	87	81	98	91	85	80	88	83	79	84	80	77	81	78	75					73				
3	92	82	75	69	90	81	74	68	78	72	67	75	70	66	73	68	64					62				
4	85	73	65	59	82	72	64	58	70	63	57	67	61	57	65	60	56					54				
5	78	66	57	51	76	65	57	51	63	56	50	61	54	50	59	53	49					47				
6	72	59	51	45	70	59	50	45	57	50	44	55	49	44	54	48	43					41				
7	67	54	46	40	65	53	45	40	52	45	39	50	44	39	49	43	39					37				
8	63	49	41	36	61	49	41	35	48	40	35	46	40	35	45	39	35					33				
9	59	46	38	32	57	45	37	32	44	37	32	43	36	32	42	36	32					30				
10	55	42	34	29	54	42	34	29	41	34	29	40	33	29	39	33	29					27				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6574	6574	6574
5°	6605	6583	6545
10°	6558	6542	6495
15°	6491	6477	6416
20°	6415	6395	6289
25°	6312	6289	6099
30°	6199	6165	5879
35°	6077	5995	5601
40°	5937	5786	5276
45°	5777	5530	4871
50°	5593	5246	4442
55°	5358	4884	4030
60°	5038	4445	3638
65°	4578	3922	3203
70°	3973	3320	2707
75°	3140	2578	2100
80°	2154	1751	1457
85°	1081	1019	957



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	230.5	3.9
10°-20°	652.7	11.1
20°-30°	966.7	16.4
30°-40°	1123.0	19.0
40°-50°	1098.5	18.6
50°-60°	909.7	15.4
60°-70°	607.5	10.3
70°-80°	270.4	4.6
80°-90°	47.0	0.8
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	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°	1849.9	31.3
0°-40°	2973.0	50.3
0°-60°	4981.1	84.3
0°-90°	5906.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5906.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2443	2443	2443	2443	2443	
5°	2445	2421	2437	2426	2423	232
15°	2330	2311	2325	2311	2303	657
25°	2126	2115	2118	2076	2054	979
35°	1850	1846	1825	1740	1705	1157
45°	1518	1512	1453	1336	1280	1171
55°	1142	1121	1041	909	859	1019
65°	719	687	616	536	503	711
75°	302	282	248	217	202	326
85°	35	35	33	32	31	53
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2443	2443	2443	2443	2443
2.5°	2456	2431	2447	2438	2427
5°	2445	2421	2437	2426	2423
7.5°	2427	2403	2419	2409	2406
10°	2400	2378	2394	2382	2377
12.5°	2370	2347	2363	2349	2347
15°	2330	2311	2325	2311	2303
17.5°	2288	2269	2282	2263	2255
20°	2240	2223	2233	2207	2196
22.5°	2186	2172	2177	2144	2129
25°	2126	2115	2118	2076	2054
27.5°	2063	2053	2056	2001	1978
30°	1995	1988	1984	1918	1892
32.5°	1924	1920	1907	1832	1800
35°	1850	1846	1825	1740	1705
37.5°	1772	1769	1738	1647	1606
40°	1690	1688	1647	1548	1502
42.5°	1606	1602	1552	1445	1397
45°	1518	1512	1453	1336	1280
47.5°	1429	1419	1356	1225	1168
50°	1336	1321	1253	1113	1061
52.5°	1241	1223	1148	1010	955
55°	1142	1121	1041	909	859
57.5°	1040	1017	933	811	767
60°	936	907	826	716	676
62.5°	828	796	719	626	588
65°	719	687	616	536	503
67.5°	608	579	517	450	423
70°	505	474	422	368	344
72.5°	399	374	333	289	269
75°	302	282	248	217	202
77.5°	214	199	174	154	143
80°	139	129	113	100	94
82.5°	79	74	66	60	56
85°	35	35	33	32	31
87.5°	11	13	16	18	17
90°	0	0	0	0	0

(END OF REPORT)