

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: P26875

Luminaire Tested: **FMS-24-2-LD4-4HI-80/84**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P26875  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: FMS-24-2-LD4-4HI-80/84  
Description: FAILSAFE SURFACE MOUNT CORRECTONAL LED 2X2 FIXTURE  
Light Source: (168) NICHIA 4000K LEDS  
2UT217042A8404A  
Ballast/Driver: (2) OSRAM ELECTRONIC DRIVER  
OT50W

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6197.8 lumens  
Efficiency: N/A  
Efficacy: 68.6 lumens/watt  
Spacing Criteria (0/90/45): 1.01 / 0.98 / 1.21  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

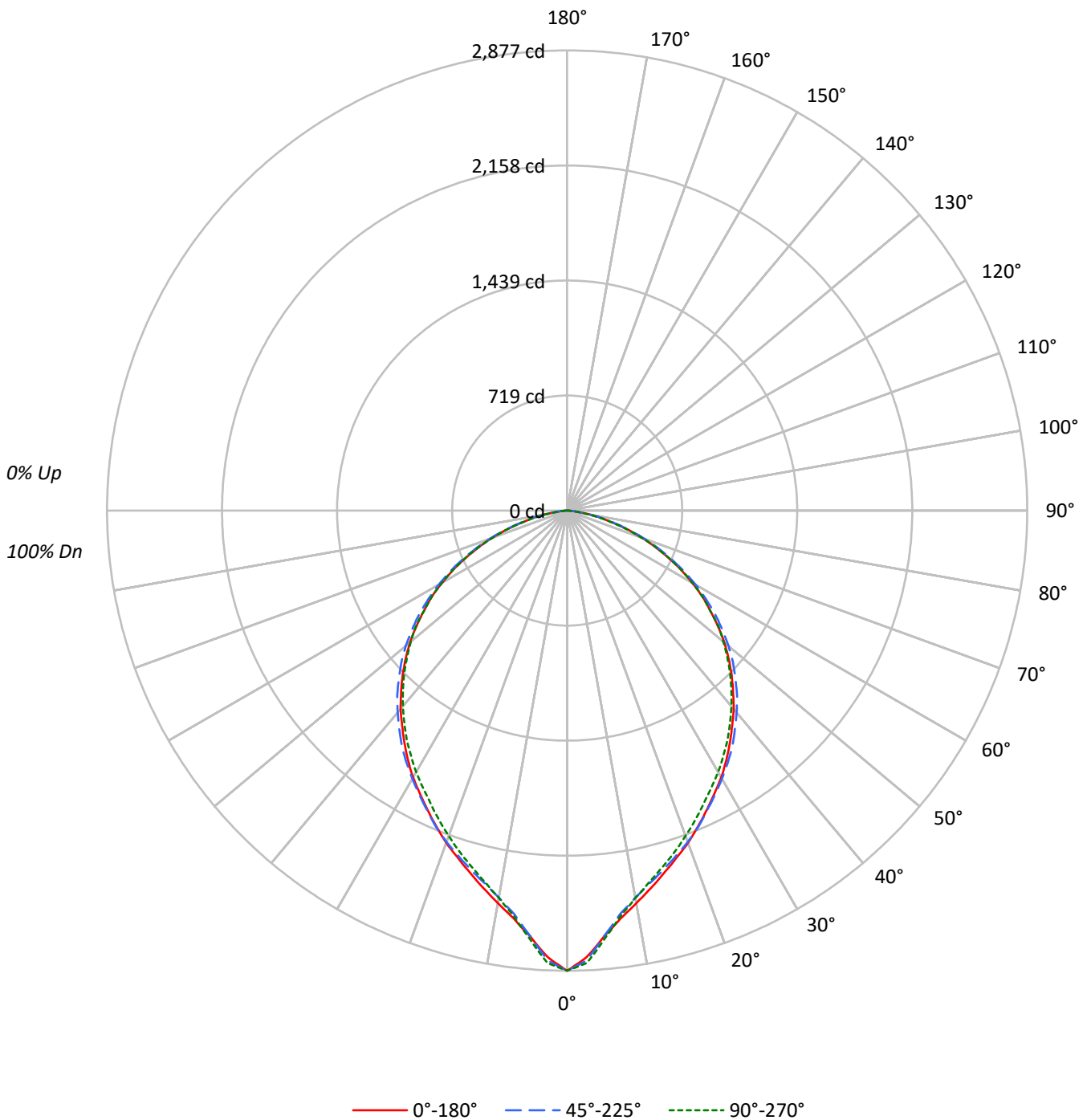
Input Watts (W): 90.3  
Input Voltage (V): 120.07  
Input Current (Ain): 0.75523  
Voltage Rise (V): NR  
Power Factor: 0.9993  
Total Harmonic Distortion (THDi): 8.20%  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: 24 HR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	105	101	97	107	103	99	96	99	96	93	95	92	90	91	89	87	85					85			
2	100	92	86	80	97	90	84	79	87	82	77	84	79	76	81	77	74	72					72			
3	91	81	73	67	89	80	72	67	77	71	65	74	69	64	72	67	63	61					61			
4	84	72	64	57	82	71	63	57	68	62	56	66	60	55	64	59	55	52					52			
5	77	65	56	50	75	64	55	49	62	54	49	60	53	48	58	52	48	46					46			
6	71	58	50	43	70	58	49	43	56	48	43	54	47	42	52	47	42	40					40			
7	66	53	45	39	65	52	44	38	51	43	38	49	43	38	48	42	38	36					36			
8	62	49	40	34	60	48	40	34	47	39	34	45	39	34	44	38	34	32					32			
9	58	45	37	31	56	44	36	31	43	36	31	42	35	31	41	35	31	29					29			
10	54	41	33	28	53	41	33	28	40	33	28	39	32	28	38	32	28	26					26			

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	7742	7742	7742
5°	7212	7210	7261
10°	6809	6711	6719
15°	6533	6477	6424
20°	6332	6314	6200
25°	6131	6143	5998
30°	5988	6013	5867
35°	5824	5913	5742
40°	5691	5793	5617
45°	5533	5663	5488
50°	5371	5514	5338
55°	5133	5292	5133
60°	4860	4994	4865
65°	4451	4578	4470
70°	3926	4028	3910
75°	3150	3265	3088
80°	2216	2294	2123
85°	1173	1235	1019



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	249.0	4.0
10°-20°	656.1	10.6
20°-30°	950.7	15.3
30°-40°	1116.6	18.0
40°-50°	1135.7	18.3
50°-60°	996.4	16.1
60°-70°	705.7	11.4
70°-80°	331.8	5.4
80°-90°	55.7	0.9
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°	1855.9	29.9
0°-40°	2972.4	48.0
0°-60°	5104.6	82.4
0°-90°	6197.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6197.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2877	2877	2877	2877	2877	
5°	2670	2673	2669	2682	2688	250
15°	2345	2343	2325	2315	2306	661
25°	2065	2080	2069	2055	2020	953
35°	1773	1806	1800	1778	1748	1110
45°	1454	1483	1488	1474	1442	1121
55°	1094	1124	1128	1116	1094	979
65°	699	722	719	710	702	693
75°	303	313	314	306	297	327
85°	38	40	40	36	33	56
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2877	2877	2877	2877	2877
2.5°	2795	2808	2814	2825	2831
5°	2670	2673	2669	2682	2688
7.5°	2571	2567	2544	2549	2557
10°	2492	2479	2456	2450	2459
12.5°	2418	2409	2386	2377	2378
15°	2345	2343	2325	2315	2306
17.5°	2275	2277	2263	2250	2237
20°	2211	2211	2205	2188	2165
22.5°	2137	2150	2141	2124	2094
25°	2065	2080	2069	2055	2020
27.5°	1994	2013	2003	1981	1953
30°	1927	1943	1935	1914	1888
32.5°	1851	1876	1869	1849	1817
35°	1773	1806	1800	1778	1748
37.5°	1695	1726	1723	1707	1672
40°	1620	1649	1649	1628	1599
42.5°	1536	1569	1572	1551	1518
45°	1454	1483	1488	1474	1442
47.5°	1369	1396	1406	1388	1358
50°	1283	1306	1317	1305	1275
52.5°	1188	1217	1222	1211	1194
55°	1094	1124	1128	1116	1094
57.5°	1003	1032	1027	1022	1003
60°	903	928	928	916	904
62.5°	804	829	825	815	805
65°	699	722	719	710	702
67.5°	599	619	614	608	600
70°	499	513	512	505	497
72.5°	398	410	409	403	397
75°	303	313	314	306	297
77.5°	219	226	226	217	213
80°	143	147	148	141	137
82.5°	82	84	86	80	75
85°	38	40	40	36	33
87.5°	14	14	14	12	10
90°	0	0	0	0	0

(END OF REPORT)