

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: P26879

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

Test Date: 10/07/15

**Test Information**

Test Method: LM-79-08  
Report Number: P26879  
Test Lab: INNOVATION CENTER-P2  
Test Date: 10/07/15  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: FMS-12-4-LD4-2HI-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**

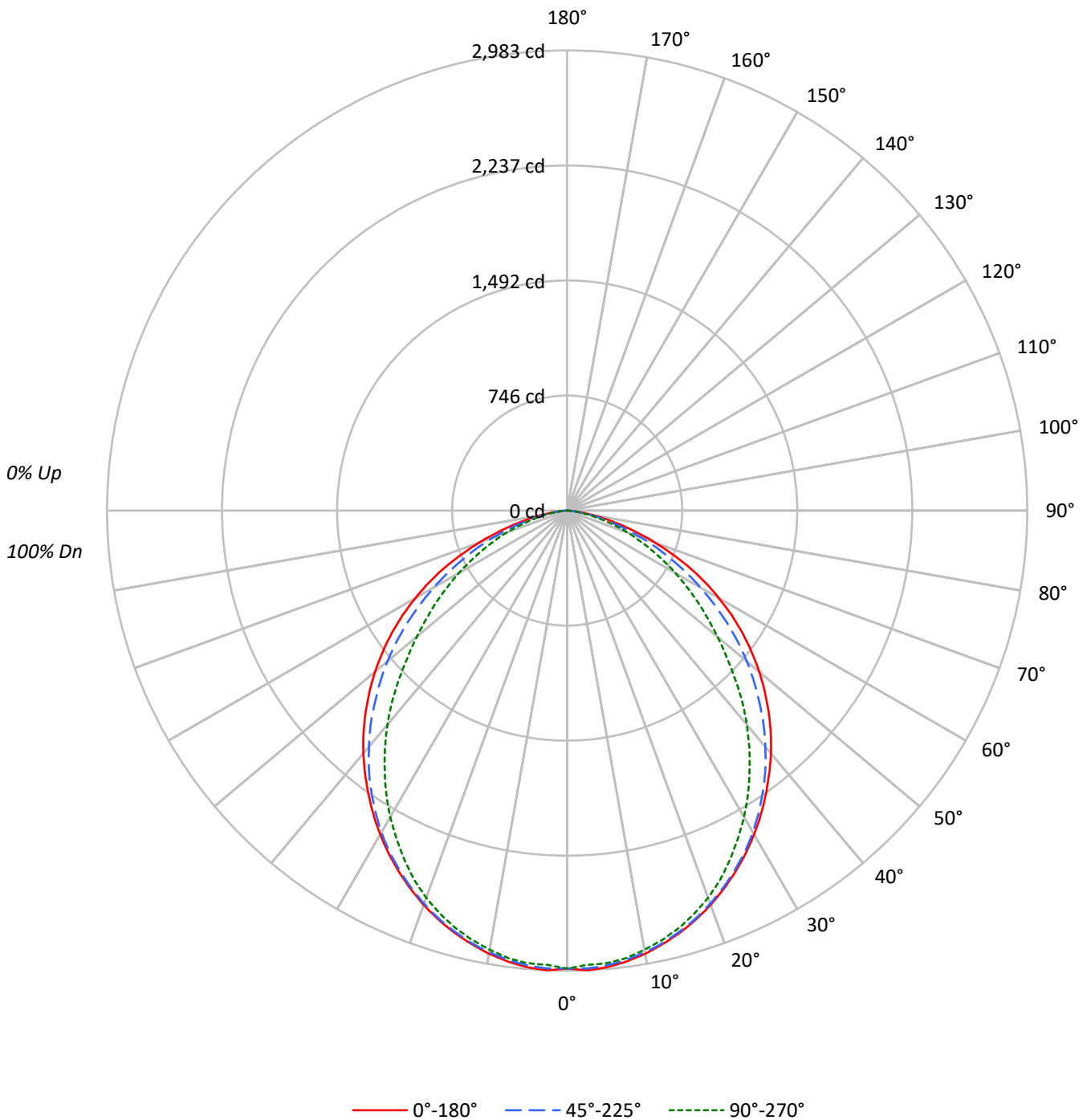
Lumens per Lamp: N/A  
Luminaire Lumens: 7153.0 lumens  
Efficiency: N/A  
Efficacy: 79.3 lumens/watt  
Spacing Criteria (0/90/45): 1.22 / 1.16 / 1.3  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 90.2  
Input Voltage (V): 120.08  
Input Current (Ain): 0.75400  
Voltage Rise (V): NR  
Power Factor: 0.9993  
Total Harmonic Distortion (THDi): 8.14%  
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	65					62				
4	85	73	65	59	82	72	64	58	70	63	58	67	61	57	65	60	56					54				
5	78	66	57	51	76	65	57	51	63	56	50	61	55	50	59	53	49					47				
6	72	60	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	50	41	36	61	49	41	36	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°	7987	7987	7987
5°	8025	7996	7955
10°	7971	7946	7897
15°	7890	7867	7803
20°	7789	7766	7649
25°	7666	7637	7414
30°	7532	7482	7125
35°	7375	7276	6771
40°	7222	7019	6365
45°	7029	6709	5853
50°	6803	6363	5321
55°	6517	5916	4846
60°	6125	5371	4359
65°	5578	4737	3833
70°	4760	4005	3289
75°	3774	3088	2558
80°	2588	2108	1782
85°	1328	1235	1204



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	280.1	3.9
10°-20°	792.9	11.1
20°-30°	1173.6	16.4
30°-40°	1361.6	19.0
40°-50°	1330.3	18.6
50°-60°	1099.3	15.4
60°-70°	732.9	10.2
70°-80°	325.4	4.5
80°-90°	56.8	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°	2246.7	31.4
0°-40°	3608.2	50.4
0°-60°	6037.9	84.4
0°-90°	7153.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7153.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2968	2968	2968	2968	2968	
5°	2971	2942	2960	2946	2945	282
15°	2832	2809	2824	2806	2801	798
25°	2582	2571	2572	2517	2497	1189
35°	2245	2242	2215	2104	2061	1405
45°	1847	1835	1763	1614	1538	1424
55°	1389	1354	1261	1094	1033	1240
65°	876	831	744	643	602	863
75°	363	338	297	260	246	392
85°	43	43	40	39	39	64
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2968	2968	2968	2968	2968
2.5°	2983	2954	2971	2962	2948
5°	2971	2942	2960	2946	2945
7.5°	2948	2921	2937	2926	2926
10°	2917	2891	2908	2893	2890
12.5°	2877	2853	2870	2852	2850
15°	2832	2809	2824	2806	2801
17.5°	2779	2758	2772	2747	2740
20°	2720	2702	2712	2677	2671
22.5°	2654	2639	2645	2600	2590
25°	2582	2571	2572	2517	2497
27.5°	2506	2496	2495	2425	2397
30°	2424	2416	2408	2324	2293
32.5°	2337	2332	2314	2217	2182
35°	2245	2242	2215	2104	2061
37.5°	2151	2148	2112	1989	1940
40°	2056	2048	1998	1867	1812
42.5°	1954	1945	1886	1745	1680
45°	1847	1835	1763	1614	1538
47.5°	1738	1722	1644	1478	1400
50°	1625	1604	1520	1342	1271
52.5°	1509	1479	1393	1214	1149
55°	1389	1354	1261	1094	1033
57.5°	1266	1228	1129	976	920
60°	1138	1093	998	862	810
62.5°	1008	964	870	751	704
65°	876	831	744	643	602
67.5°	736	700	624	539	504
70°	605	573	509	441	418
72.5°	480	449	400	347	327
75°	363	338	297	260	246
77.5°	258	240	210	184	175
80°	167	155	136	121	115
82.5°	95	89	79	72	70
85°	43	43	40	39	39
87.5°	13	16	19	21	22
90°	0	0	0	0	0

(END OF REPORT)