

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: P26877

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

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P26877  
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-LD4-2LO-80/84  
Description: FAILSAFE SURFACE MOUNT CORRECTONAL LED 1X4 FIXTURE  
Light Source: (168) NICHIA 4000K LEDS  
2UT217042A8404A  
Ballast/Driver: (2) OSRAM ELECTRONIC DRIVER  
OT50W

**Summary**

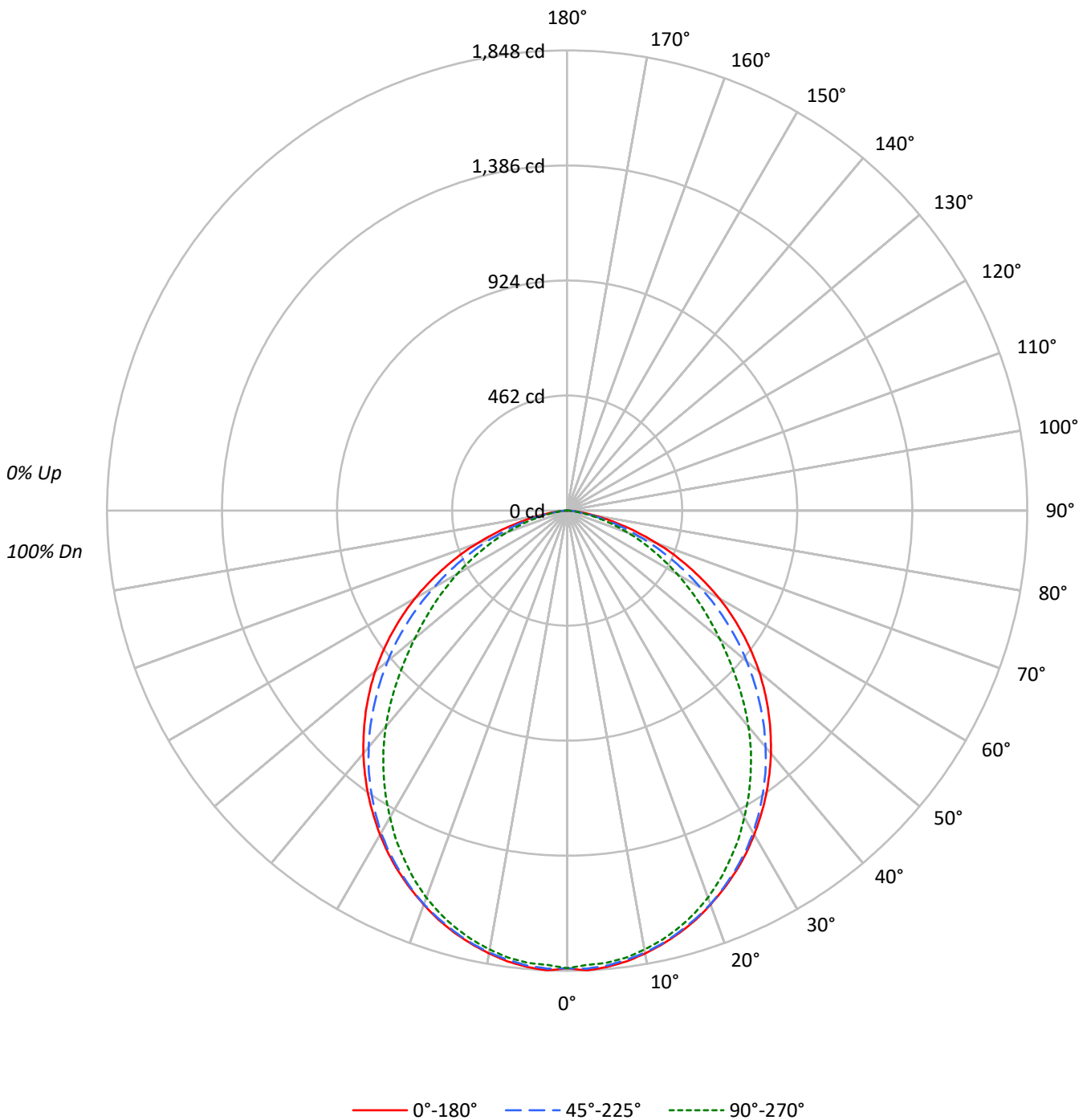
Lumens per Lamp: N/A  
Luminaire Lumens: 4444.3 lumens  
Efficiency: N/A  
Efficacy: 92.8 lumens/watt  
Spacing Criteria (0/90/45): 1.22 / 1.16 / 1.3  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 47.9  
Input Voltage (V): 120.02  
Input Current (Ain): 0.40196  
Voltage Rise (V): NR  
Power Factor: 0.9959  
Total Harmonic Distortion (THDi): 7.69%  
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°	4946	4946	4946
5°	4970	4954	4924
10°	4935	4924	4891
15°	4886	4875	4831
20°	4822	4817	4737
25°	4754	4736	4593
30°	4670	4642	4419
35°	4576	4514	4221
40°	4472	4356	3980
45°	4354	4163	3669
50°	4216	3939	3341
55°	4035	3664	3045
60°	3800	3331	2745
65°	3457	2942	2420
70°	3013	2478	2038
75°	2391	1934	1591
80°	1627	1317	1100
85°	865	772	741



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	173.5	3.9
10°-20°	491.2	11.1
20°-30°	727.6	16.4
30°-40°	845.4	19.0
40°-50°	827.1	18.6
50°-60°	684.4	15.4
60°-70°	456.7	10.3
70°-80°	203.1	4.6
80°-90°	35.3	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°	1392.3	31.3
0°-40°	2237.7	50.3
0°-60°	3749.2	84.4
0°-90°	4444.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4444.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1838	1838	1838	1838	1838	
5°	1840	1821	1834	1826	1823	175
15°	1754	1739	1750	1738	1734	495
25°	1601	1593	1595	1560	1547	737
35°	1393	1391	1374	1306	1285	871
45°	1144	1140	1094	1006	964	882
55°	860	843	781	683	649	768
65°	543	517	462	402	380	538
75°	230	210	186	162	153	248
85°	28	26	25	24	24	40
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1838	1838	1838	1838	1838
2.5°	1848	1829	1841	1835	1826
5°	1840	1821	1834	1826	1823
7.5°	1826	1808	1820	1813	1811
10°	1806	1790	1802	1792	1790
12.5°	1782	1766	1779	1767	1765
15°	1754	1739	1750	1738	1734
17.5°	1722	1708	1718	1702	1697
20°	1684	1674	1682	1659	1654
22.5°	1644	1636	1640	1612	1604
25°	1601	1593	1595	1560	1547
27.5°	1554	1547	1547	1504	1489
30°	1503	1498	1494	1441	1422
32.5°	1449	1446	1435	1376	1357
35°	1393	1391	1374	1306	1285
37.5°	1334	1333	1309	1239	1212
40°	1273	1272	1240	1164	1133
42.5°	1209	1207	1169	1087	1050
45°	1144	1140	1094	1006	964
47.5°	1076	1070	1018	922	879
50°	1007	997	941	839	798
52.5°	934	922	864	758	722
55°	860	843	781	683	649
57.5°	784	764	702	610	578
60°	706	680	619	539	510
62.5°	625	598	539	469	444
65°	543	517	462	402	380
67.5°	465	434	389	337	319
70°	383	355	315	275	259
72.5°	304	279	250	216	203
75°	230	210	186	162	153
77.5°	164	150	131	115	108
80°	105	97	85	76	71
82.5°	59	55	49	45	43
85°	28	26	25	24	24
87.5°	8	10	12	13	13
90°	0	0	0	0	0

(END OF REPORT)