

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: P183418

Luminaire Tested: **FMS-24-4-LD4-4STD-80-84**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P183418
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P26873)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FMS-24-4-LD4-4STD-80-84
Description:
Light Source: 2UT217042A8404A
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12639.3 lumens
Efficiency: N/A
Efficacy: 91.3 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.2 / 1.33
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

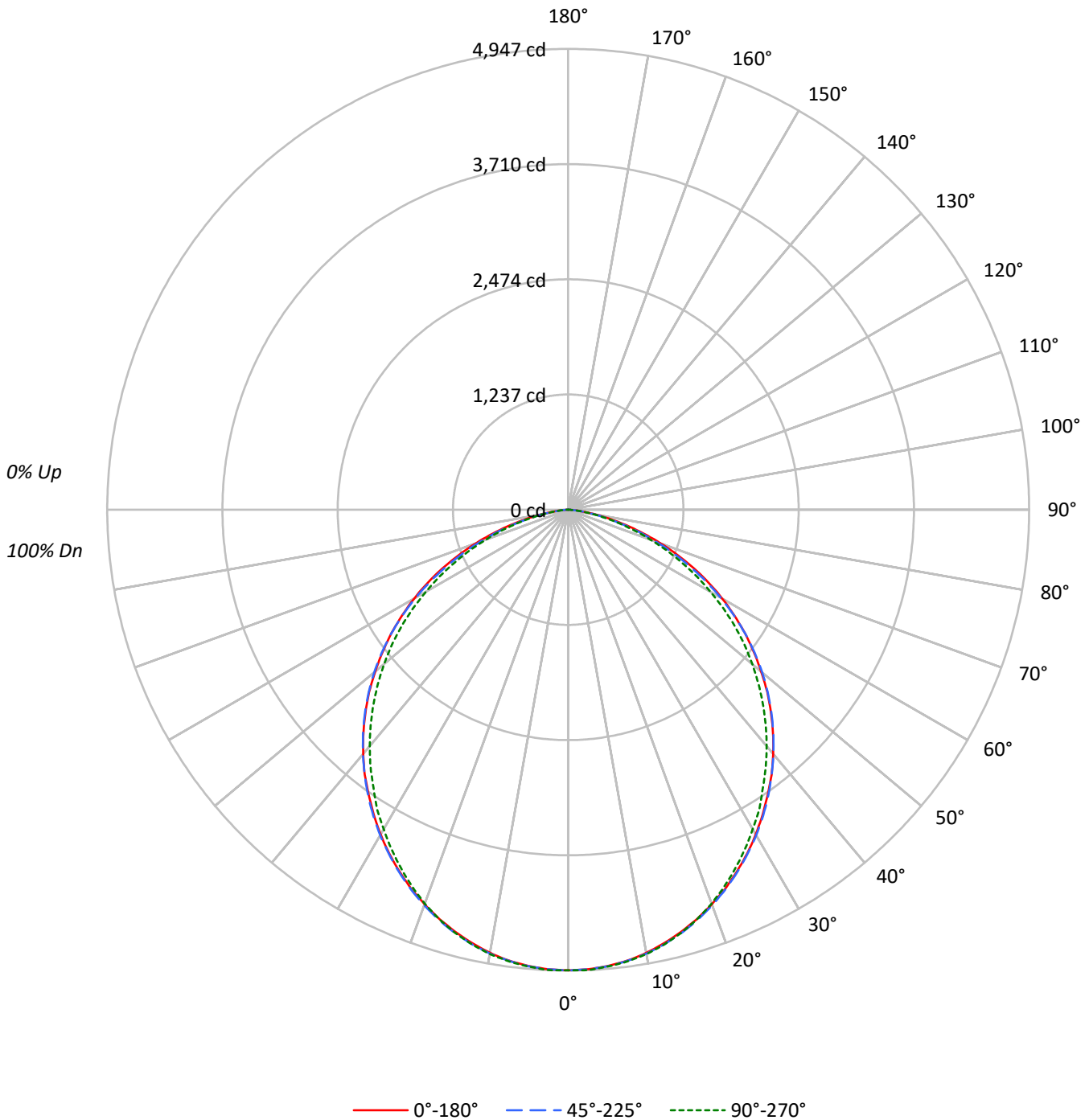
Input Watts (W): 138.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10																
RCR	0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100																	
	1	110	105	101	98	107	103	99	96	99	96	93	95	92	90	91	89	87	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85																	
	2	100	92	86	80	97	90	84	79	87	82	78	84	79	76	81	77	74	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72																
	3	92	81	74	67	89	80	73	67	77	71	66	74	69	64	72	67	63	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61																
	4	84	72	64	57	82	71	63	57	69	62	56	66	60	55	64	59	55	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53																
	5	77	65	56	50	75	64	55	49	62	54	49	60	53	48	58	52	48	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46																
	6	71	58	50	43	70	58	49	43	56	48	43	54	48	43	52	47	42	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40																
	7	66	53	44	38	65	52	44	38	51	43	38	49	43	38	48	42	38	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36																
	8	62	48	40	34	60	48	40	34	46	39	34	45	39	34	44	38	34	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32																
	9	58	45	36	31	56	44	36	31	43	36	31	42	35	31	41	35	30	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29																
	10	54	41	33	28	53	41	33	28	40	33	28	39	32	28	38	32	28	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26																

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6653	6653	6653
5°	6640	6644	6648
10°	6600	6610	6617
15°	6534	6551	6547
20°	6454	6470	6442
25°	6362	6374	6304
30°	6255	6270	6153
35°	6133	6149	5982
40°	6012	6017	5820
45°	5855	5868	5623
50°	5655	5688	5401
55°	5435	5437	5123
60°	5139	5086	4746
65°	4732	4592	4287
70°	4148	3943	3680
75°	3348	3099	2966
80°	2328	2137	2060
85°	1186	1096	1108



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	467.0	3.7
10°-20°	1325.0	10.5
20°-30°	1972.4	15.6
30°-40°	2325.4	18.4
40°-50°	2347.1	18.6
50°-60°	2030.1	16.1
60°-70°	1411.8	11.2
70°-80°	651.9	5.2
80°-90°	108.5	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°	3764.5	29.8
0°-40°	6089.9	48.2
0°-60°	10467.0	82.8
0°-90°	12639.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12639.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4945	4945	4945	4945	4945	
5°	4916	4915	4919	4925	4922	467
15°	4690	4696	4703	4704	4700	1323
25°	4285	4298	4293	4270	4246	1974
35°	3734	3752	3744	3688	3642	2337
45°	3077	3075	3084	3004	2955	2372
55°	2317	2294	2318	2237	2184	2068
65°	1486	1461	1442	1389	1347	1468
75°	644	632	596	586	570	692
85°	77	78	71	73	72	114
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4944.8	4944.8	4944.8	4944.8	4944.8
2.5°	4937.4	4934.9	4939.0	4945.6	4947.3
5°	4915.9	4915.1	4919.2	4925.0	4922.5
7.5°	4882.1	4881.2	4884.5	4892.0	4890.3
10°	4830.9	4832.5	4838.3	4844.9	4843.3
12.5°	4765.6	4769.8	4777.2	4782.2	4779.7
15°	4690.5	4696.3	4702.9	4703.7	4700.4
17.5°	4603.8	4614.5	4617.0	4612.9	4607.1
20°	4507.2	4519.6	4518.8	4513.0	4499.0
22.5°	4404.0	4413.9	4410.6	4399.9	4378.4
25°	4285.1	4298.3	4293.4	4270.3	4246.3
27.5°	4160.4	4173.7	4167.0	4137.3	4107.6
30°	4025.9	4041.5	4035.8	3994.5	3960.6
32.5°	3882.2	3900.4	3893.8	3844.2	3816.1
35°	3733.6	3751.7	3743.5	3688.2	3641.9
37.5°	3585.8	3592.4	3587.4	3525.5	3484.2
40°	3423.1	3428.1	3425.6	3357.9	3313.3
42.5°	3253.1	3254.7	3258.8	3184.5	3136.6
45°	3077.2	3074.7	3083.8	3003.7	2955.0
47.5°	2896.4	2888.1	2906.3	2818.8	2769.2
50°	2701.5	2694.9	2717.2	2628.9	2580.2
52.5°	2511.6	2496.8	2522.4	2435.7	2385.3
55°	2316.8	2294.5	2317.6	2236.7	2183.8
57.5°	2115.3	2088.9	2107.1	2031.1	1976.6
60°	1909.7	1880.0	1889.9	1819.7	1763.6
62.5°	1700.0	1668.6	1666.2	1605.1	1558.0
65°	1486.2	1461.4	1442.4	1388.7	1346.6
67.5°	1269.8	1249.2	1220.3	1175.7	1142.7
70°	1054.4	1037.8	1002.3	969.3	935.5
72.5°	844.6	827.3	794.3	772.0	747.2
75°	644.0	632.4	596.1	586.2	570.5
77.5°	461.5	451.6	421.9	417.8	407.9
80°	300.5	293.9	275.8	272.5	265.9
82.5°	170.9	166.8	156.0	155.2	153.6
85°	76.8	77.6	71.0	72.7	71.8
87.5°	22.3	25.6	23.9	25.6	23.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)