

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: P547416

Luminaire Tested: **FMR-24-4-LD4-4LO-50-UNV-80-85-EDD**

Issue Date: 6/15/2021

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.



Test Information

Test Method: LM-79-08
Report Number: P547416
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-5)
Test Lab: INNOVATION CENTER
Issue Date: 6/15/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FMR-24-4-LD4-4LO-50-UNV-80-85-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

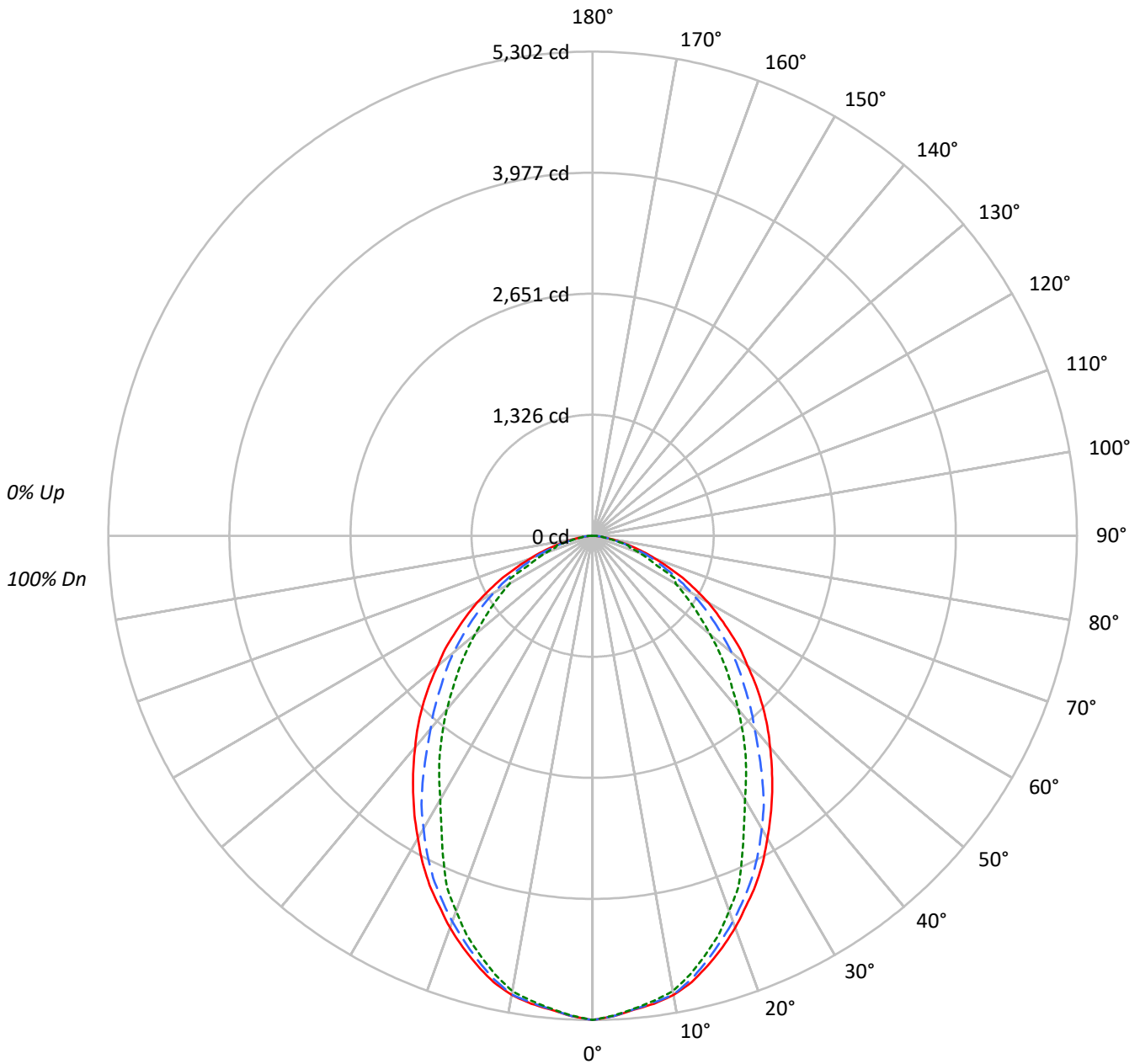
Lumens per Lamp: N/A
Luminaire Lumens: 10409.0 lumens
Efficiency: N/A
Efficacy: 111.2 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 93.6
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									
RC	80									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	0																
RCR																																					
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100																			
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87																			
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75																			
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65																			
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56																			
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50																			
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44																			
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40																			
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36																			
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33																			
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30																			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7134	7134	7134
5°	7037	7029	7021
10°	6976	6968	6917
15°	6788	6720	6626
20°	6539	6433	6258
25°	6270	6133	5751
30°	5943	5752	5181
35°	5628	5316	4792
40°	5308	4845	4360
45°	5004	4479	3942
50°	4632	4157	3516
55°	4285	3767	3149
60°	3926	3365	2821
65°	3454	2947	2498
70°	2845	2580	2122
75°	2262	1975	2071
80°	1520	1425	1330
85°	946	1136	1325



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	493.6	4.7
10°-20°	1354.5	13.0
20°-30°	1875.3	18.0
30°-40°	1999.6	19.2
40°-50°	1824.2	17.5
50°-60°	1429.1	13.7
60°-70°	931.4	8.9
70°-80°	412.7	4.0
80°-90°	88.6	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°	3723.4	35.8
0°-40°	5723.0	55.0
0°-60°	8976.3	86.2
0°-90°	10409.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10409.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5302	5302	5302	5302	5302	
5°	5210	5204	5204	5198	5198	495
15°	4873	4873	4824	4775	4757	1370
25°	4223	4199	4131	3984	3874	1939
35°	3426	3402	3236	2991	2918	2142
45°	2630	2574	2354	2158	2072	2026
55°	1827	1772	1606	1416	1342	1638
65°	1085	1024	926	944	785	1069
75°	435	405	380	362	398	466
85°	61	67	74	80	86	85
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5302.2	5302.2	5302.2	5302.2	5302.2
2.5°	5265.4	5265.4	5265.4	5259.3	5259.3
5°	5210.3	5204.1	5204.1	5198.0	5198.0
7.5°	5167.4	5161.2	5155.1	5149.0	5136.7
10°	5106.1	5106.1	5099.9	5069.3	5063.1
12.5°	5008.0	5001.8	4977.3	4934.4	4922.2
15°	4873.1	4873.1	4824.1	4775.0	4756.7
17.5°	4726.0	4719.9	4658.6	4609.5	4585.0
20°	4566.6	4554.4	4493.1	4413.4	4370.5
22.5°	4388.9	4388.9	4315.3	4211.1	4168.2
25°	4223.4	4198.9	4131.4	3984.3	3874.0
27.5°	4033.4	3996.6	3923.0	3714.6	3585.9
30°	3824.9	3806.6	3702.3	3432.6	3334.6
32.5°	3628.8	3598.1	3487.8	3205.8	3126.2
35°	3426.5	3402.0	3236.5	2991.3	2917.7
37.5°	3224.2	3193.6	2985.2	2789.0	2697.1
40°	3022.0	2985.2	2758.4	2580.6	2482.5
42.5°	2831.9	2782.9	2562.2	2372.2	2261.9
45°	2629.6	2574.5	2353.8	2157.7	2071.8
47.5°	2427.4	2378.3	2176.0	1973.8	1875.7
50°	2212.8	2169.9	1986.0	1783.7	1679.5
52.5°	2035.1	1967.6	1789.9	1587.6	1501.8
55°	1826.7	1771.5	1606.0	1416.0	1342.4
57.5°	1636.6	1581.5	1428.2	1250.5	1189.2
60°	1458.9	1379.2	1250.5	1097.2	1048.2
62.5°	1262.7	1201.4	1091.1	962.4	1023.7
65°	1085.0	1023.7	925.6	944.0	784.6
67.5°	888.8	858.2	772.3	686.5	662.0
70°	723.3	686.5	655.9	563.9	539.4
72.5°	576.2	539.4	496.5	447.5	429.1
75°	435.2	404.6	380.0	361.7	398.4
77.5°	300.4	288.1	269.7	251.3	245.2
80°	196.2	190.0	183.9	177.8	171.6
82.5°	116.5	116.5	116.5	116.5	116.5
85°	61.3	67.4	73.6	79.7	85.8
87.5°	36.8	36.8	42.9	49.0	55.2
90°	0.0	0.0	0.0	0.0	0.0



Report Generated By 670246072 / DESKTOP-MV3F9LC





— 0°-180° - - 45°-225° - - - - 90°-270°







(END OF REPORT)