

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: P547488

Luminaire Tested: **FMR-24-4-LD4-4STD-40-UNV-81-85-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: P547488
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-LD4-4STD-40-UNV-81-85-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

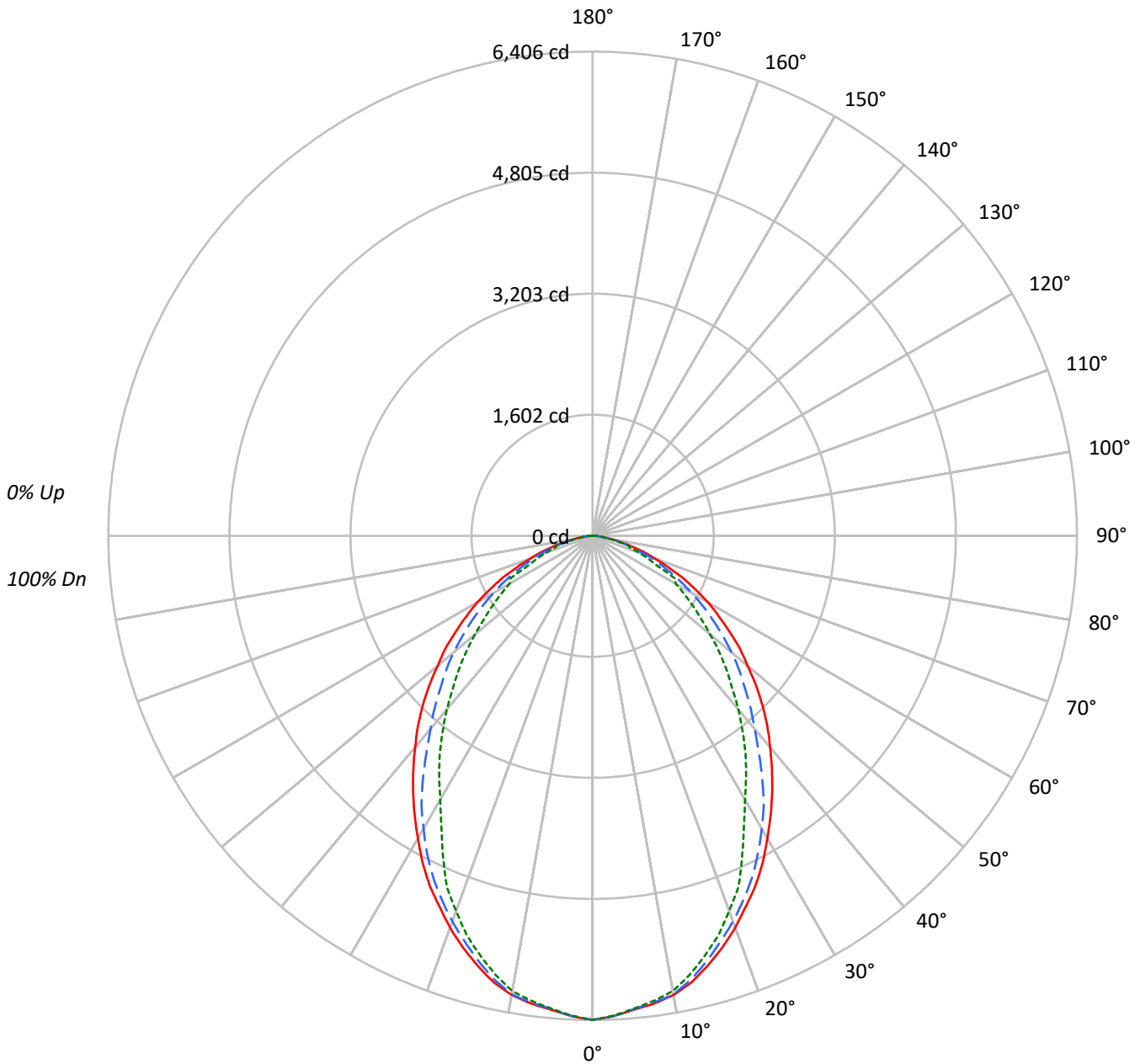
Lumens per Lamp: N/A
Luminaire Lumens: 12575.0 lumens
Efficiency: N/A
Efficacy: 94.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 133.2
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°	8619	8619	8619
5°	8502	8492	8481
10°	8428	8418	8357
15°	8201	8118	8005
20°	7899	7772	7560
25°	7575	7410	6948
30°	7179	6949	6259
35°	6799	6422	5790
40°	6412	5853	5268
45°	6045	5411	4763
50°	5596	5022	4247
55°	5177	4551	3804
60°	4743	4065	3408
65°	4173	3560	3018
70°	3437	3117	2564
75°	2733	2387	2502
80°	1836	1722	1606
85°	1144	1372	1601



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	596.3	4.7
10°-20°	1636.4	13.0
20°-30°	2265.5	18.0
30°-40°	2415.7	19.2
40°-50°	2203.8	17.5
50°-60°	1726.5	13.7
60°-70°	1125.3	8.9
70°-80°	498.5	4.0
80°-90°	107.0	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°	4498.2	35.8
0°-40°	6913.9	55.0
0°-60°	10844.2	86.2
0°-90°	12575.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12575.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6406	6406	6406	6406	6406	
5°	6294	6287	6287	6280	6280	597
15°	5887	5887	5828	5769	5746	1655
25°	5102	5073	4991	4813	4680	2342
35°	4140	4110	3910	3614	3525	2588
45°	3177	3110	2844	2607	2503	2447
55°	2207	2140	1940	1711	1622	1979
65°	1311	1237	1118	1140	948	1292
75°	526	489	459	437	481	564
85°	74	82	89	96	104	103
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6405.5	6405.5	6405.5	6405.5	6405.5
2.5°	6361.1	6361.1	6361.1	6353.7	6353.7
5°	6294.5	6287.1	6287.1	6279.6	6279.6
7.5°	6242.6	6235.2	6227.8	6220.4	6205.6
10°	6168.6	6168.6	6161.2	6124.1	6116.7
12.5°	6050.1	6042.7	6013.1	5961.2	5946.4
15°	5887.2	5887.2	5827.9	5768.7	5746.5
17.5°	5709.4	5702.0	5628.0	5568.7	5539.1
20°	5516.9	5502.1	5428.0	5331.8	5279.9
22.5°	5302.2	5302.2	5213.3	5087.4	5035.6
25°	5102.2	5072.6	4991.1	4813.4	4680.1
27.5°	4872.7	4828.2	4739.4	4487.6	4332.1
30°	4620.9	4598.7	4472.8	4146.9	4028.5
32.5°	4383.9	4346.9	4213.6	3872.9	3776.7
35°	4139.5	4109.9	3910.0	3613.8	3524.9
37.5°	3895.2	3858.1	3606.4	3369.4	3258.3
40°	3650.8	3606.4	3332.4	3117.6	2999.1
42.5°	3421.2	3362.0	3095.4	2865.8	2732.5
45°	3176.9	3110.2	2843.6	2606.6	2503.0
47.5°	2932.5	2873.2	2628.9	2384.5	2266.0
50°	2673.3	2621.5	2399.3	2154.9	2029.0
52.5°	2458.5	2377.1	2162.3	1918.0	1814.3
55°	2206.8	2140.1	1940.2	1710.6	1621.7
57.5°	1977.2	1910.6	1725.4	1510.7	1436.6
60°	1762.4	1666.2	1510.7	1325.5	1266.3
62.5°	1525.5	1451.4	1318.1	1162.6	1236.7
65°	1310.7	1236.7	1118.2	1140.4	947.9
67.5°	1073.8	1036.7	933.1	829.4	799.8
70°	873.8	829.4	792.4	681.3	651.7
72.5°	696.1	651.7	599.8	540.6	518.4
75°	525.8	488.7	459.1	436.9	481.3
77.5°	362.9	348.0	325.8	303.6	296.2
80°	237.0	229.6	222.2	214.8	207.3
82.5°	140.7	140.7	140.7	140.7	140.7
85°	74.1	81.5	88.9	96.3	103.7
87.5°	44.4	44.4	51.8	59.2	66.6
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)