

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: P547320

Luminaire Tested: **FMR-24-4-LD4-4HI-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: P547320
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-LD4-4HI-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

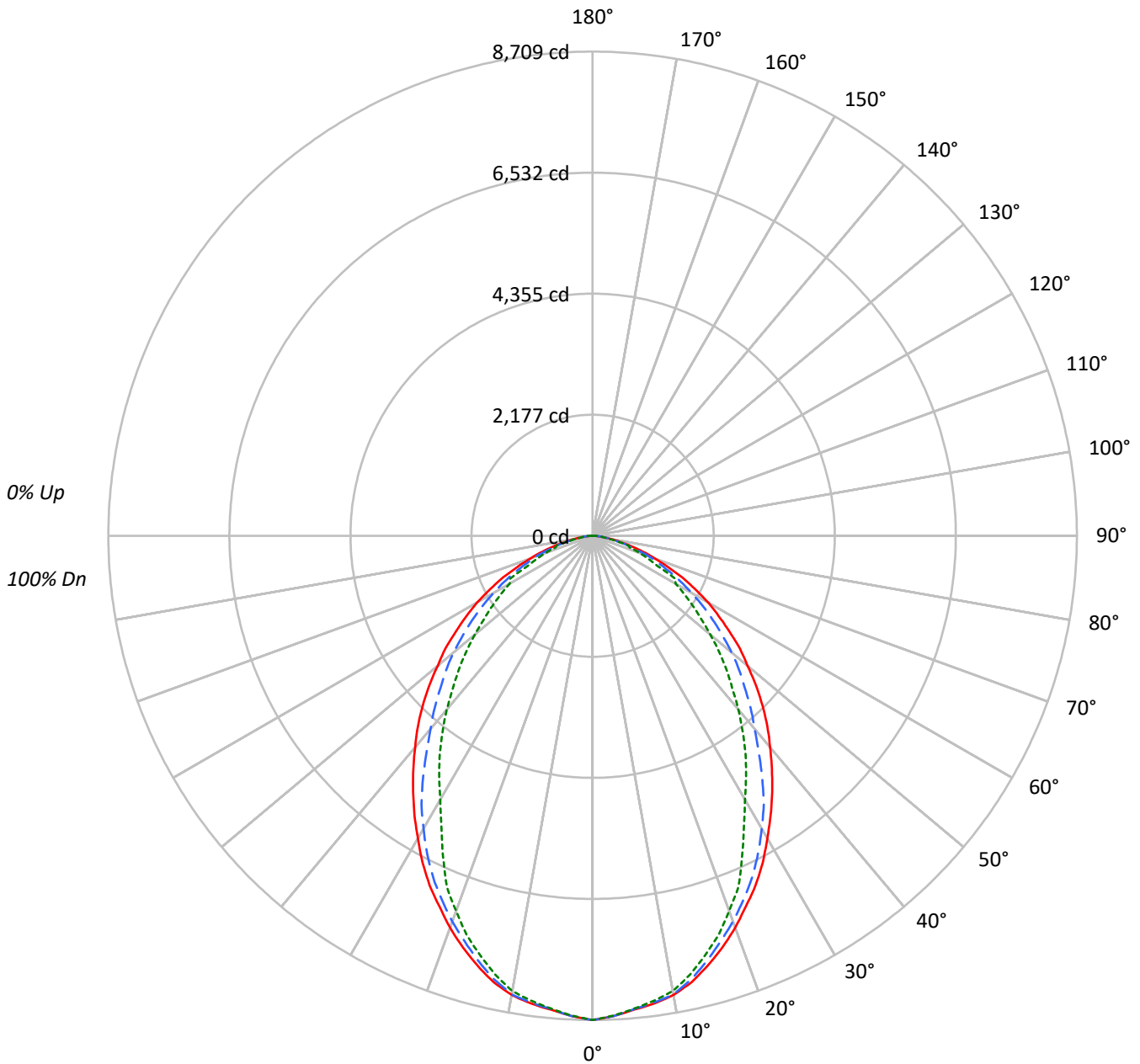
Lumens per Lamp: N/A
Luminaire Lumens: 17097.0 lumens
Efficiency: N/A
Efficacy: 98.9 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 172.8
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°	11718	11718	11718
5°	11559	11545	11531
10°	11458	11445	11362
15°	11149	11037	10883
20°	10740	10567	10279
25°	10299	10074	9447
30°	9761	9448	8509
35°	9244	8732	7872
40°	8718	7958	7162
45°	8219	7357	6475
50°	7608	6828	5775
55°	7038	6188	5172
60°	6448	5527	4633
65°	5674	4840	4103
70°	4674	4238	3485
75°	3716	3245	3402
80°	2497	2340	2184
85°	1555	1865	2177



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	810.7	4.7
10°-20°	2224.9	13.0
20°-30°	3080.2	18.0
30°-40°	3284.4	19.2
40°-50°	2996.3	17.5
50°-60°	2347.4	13.7
60°-70°	1529.9	8.9
70°-80°	677.8	4.0
80°-90°	145.5	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°	6115.7	35.8
0°-40°	9400.1	55.0
0°-60°	14743.8	86.2
0°-90°	17097.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	17097.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	8709	8709	8709	8709	8709	
5°	8558	8548	8548	8538	8538	812
15°	8004	8004	7924	7843	7813	2250
25°	6937	6897	6786	6544	6363	3185
35°	5628	5588	5316	4913	4792	3519
45°	4319	4229	3866	3544	3403	3327
55°	3000	2910	2638	2326	2205	2691
65°	1782	1681	1520	1550	1289	1756
75°	715	664	624	594	654	766
85°	101	111	121	131	141	140
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	8709.0	8709.0	8709.0	8709.0	8709.0
2.5°	8648.6	8648.6	8648.6	8638.5	8638.5
5°	8558.0	8547.9	8547.9	8537.8	8537.8
7.5°	8487.5	8477.4	8467.3	8457.3	8437.1
10°	8386.8	8386.8	8376.7	8326.4	8316.3
12.5°	8225.7	8215.6	8175.4	8104.9	8084.8
15°	8004.2	8004.2	7923.7	7843.1	7812.9
17.5°	7762.6	7752.5	7651.8	7571.3	7531.0
20°	7500.8	7480.7	7380.0	7249.1	7178.6
22.5°	7208.8	7208.8	7088.0	6916.8	6846.4
25°	6937.0	6896.7	6786.0	6544.3	6363.1
27.5°	6624.9	6564.5	6443.6	6101.3	5889.9
30°	6282.5	6252.3	6081.2	5638.2	5477.1
32.5°	5960.4	5910.0	5728.8	5265.7	5134.8
35°	5628.1	5587.8	5316.0	4913.3	4792.5
37.5°	5295.9	5245.5	4903.2	4581.0	4430.0
40°	4963.6	4903.2	4530.7	4238.7	4077.6
42.5°	4651.5	4571.0	4208.5	3896.4	3715.2
45°	4319.3	4228.6	3866.2	3544.0	3403.0
47.5°	3987.0	3906.5	3574.2	3242.0	3080.9
50°	3634.6	3564.1	3262.1	2929.8	2758.7
52.5°	3342.6	3231.9	2939.9	2607.7	2466.7
55°	3000.3	2909.7	2637.9	2325.8	2204.9
57.5°	2688.2	2597.6	2345.9	2053.9	1953.2
60°	2396.2	2265.3	2053.9	1802.2	1721.7
62.5°	2074.0	1973.4	1792.1	1580.7	1681.4
65°	1782.1	1681.4	1520.3	1550.5	1288.7
67.5°	1459.9	1409.5	1268.6	1127.6	1087.4
70°	1188.0	1127.6	1077.3	926.3	886.0
72.5°	946.4	886.0	815.5	735.0	704.8
75°	714.8	664.5	624.2	594.0	654.4
77.5°	493.3	473.2	443.0	412.8	402.7
80°	322.2	312.1	302.0	292.0	281.9
82.5°	191.3	191.3	191.3	191.3	191.3
85°	100.7	110.8	120.8	130.9	141.0
87.5°	60.4	60.4	70.5	80.5	90.6
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)