

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: P547496

Luminaire Tested: **FMR-24-4-LD4-4STD-40-UNV-82-85-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: P547496
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-82-85-EDD
Description: 2X4 FMR TROFFER WITH .187 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

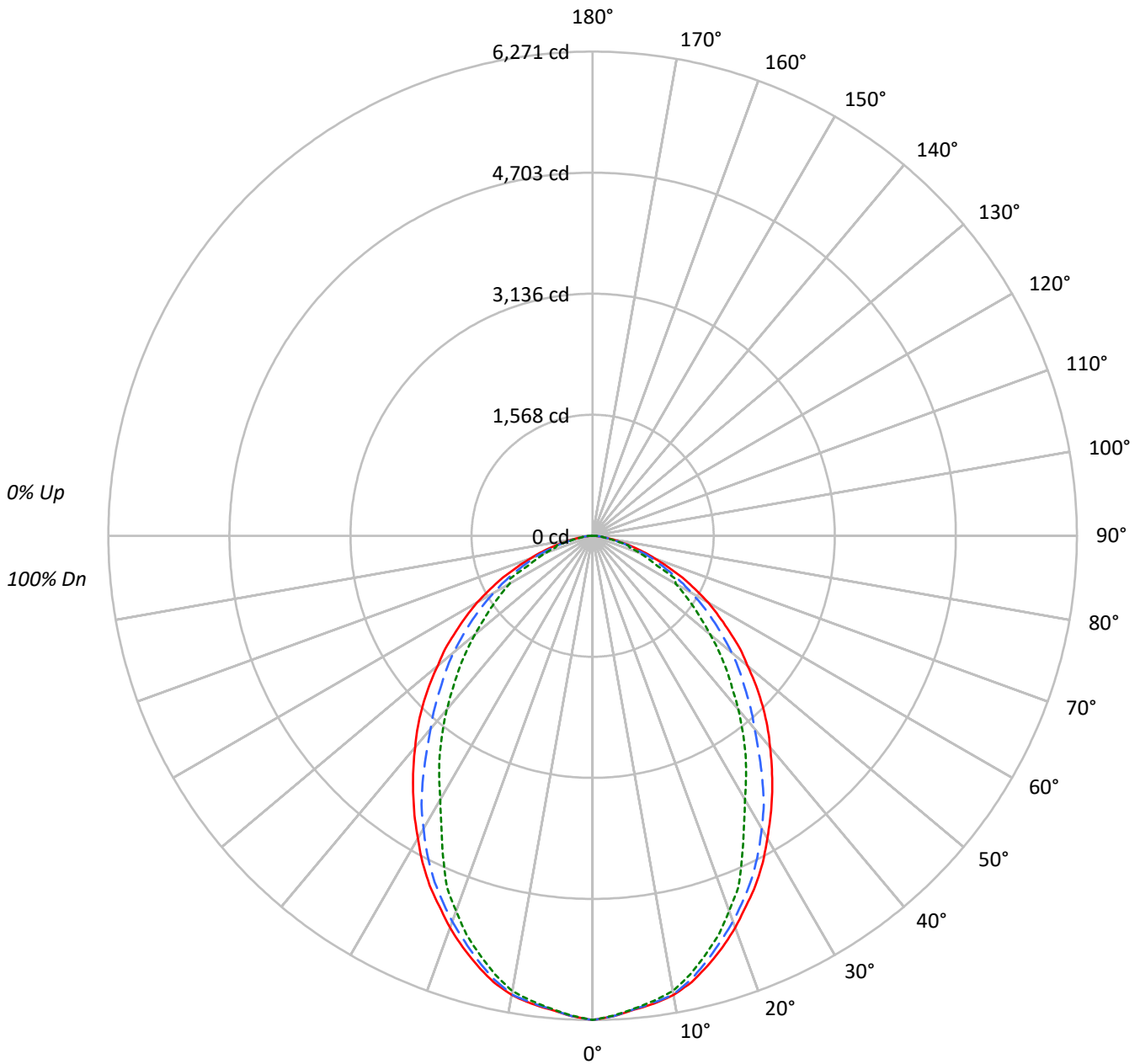
Lumens per Lamp: N/A
Luminaire Lumens: 12311.0 lumens
Efficiency: N/A
Efficacy: 92.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	8438	8438	8438
5°	8323	8313	8303
10°	8251	8241	8181
15°	8028	7948	7836
20°	7734	7609	7401
25°	7416	7254	6802
30°	7028	6803	6127
35°	6657	6287	5668
40°	6278	5730	5157
45°	5918	5297	4663
50°	5478	4917	4158
55°	5068	4456	3724
60°	4643	3980	3336
65°	4085	3485	2954
70°	3365	3052	2510
75°	2676	2337	2450
80°	1798	1685	1573
85°	1119	1343	1567



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	583.8	4.7
10°-20°	1602.1	13.0
20°-30°	2217.9	18.0
30°-40°	2365.0	19.2
40°-50°	2157.5	17.5
50°-60°	1690.3	13.7
60°-70°	1101.6	8.9
70°-80°	488.1	4.0
80°-90°	104.8	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°	4403.8	35.8
0°-40°	6768.7	55.0
0°-60°	10616.5	86.2
0°-90°	12311.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12311.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6271	6271	6271	6271	6271	
5°	6162	6155	6155	6148	6148	585
15°	5764	5764	5706	5648	5626	1620
25°	4995	4966	4886	4712	4582	2293
35°	4053	4024	3828	3538	3451	2534
45°	3110	3045	2784	2552	2450	2396
55°	2160	2095	1899	1675	1588	1938
65°	1283	1211	1095	1116	928	1265
75°	515	478	450	428	471	552
85°	72	80	87	94	102	101
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6271.1	6271.1	6271.1	6271.1	6271.1
2.5°	6227.6	6227.6	6227.6	6220.3	6220.3
5°	6162.3	6155.1	6155.1	6147.8	6147.8
7.5°	6111.6	6104.3	6097.1	6089.8	6075.3
10°	6039.1	6039.1	6031.8	5995.6	5988.3
12.5°	5923.1	5915.8	5886.8	5836.1	5821.6
15°	5763.6	5763.6	5705.6	5647.6	5625.8
17.5°	5589.6	5582.3	5509.8	5451.8	5422.8
20°	5401.1	5386.6	5314.1	5219.8	5169.1
22.5°	5190.8	5190.8	5103.8	4980.6	4929.8
25°	4995.1	4966.1	4886.4	4712.4	4581.9
27.5°	4770.4	4726.9	4639.9	4393.4	4241.1
30°	4523.9	4502.1	4378.9	4059.9	3943.9
32.5°	4291.9	4255.6	4125.1	3791.6	3697.4
35°	4052.6	4023.6	3827.9	3537.9	3450.9
37.5°	3813.4	3777.1	3530.6	3298.6	3189.9
40°	3574.1	3530.6	3262.4	3052.2	2936.2
42.5°	3349.4	3291.4	3030.4	2805.7	2675.2
45°	3110.2	3044.9	2783.9	2551.9	2450.4
47.5°	2870.9	2812.9	2573.7	2334.4	2218.4
50°	2617.2	2566.4	2348.9	2109.7	1986.4
52.5°	2406.9	2327.2	2116.9	1877.7	1776.2
55°	2160.4	2095.2	1899.4	1674.7	1587.7
57.5°	1935.7	1870.4	1689.2	1479.0	1406.5
60°	1725.4	1631.2	1479.0	1297.7	1239.7
62.5°	1493.5	1421.0	1290.5	1138.2	1210.7
65°	1283.2	1210.7	1094.7	1116.5	928.0
67.5°	1051.2	1015.0	913.5	812.0	783.0
70°	855.5	812.0	775.7	667.0	638.0
72.5°	681.5	638.0	587.2	529.2	507.5
75°	514.7	478.5	449.5	427.7	471.2
77.5°	355.2	340.7	319.0	297.2	290.0
80°	232.0	224.7	217.5	210.2	203.0
82.5°	137.7	137.7	137.7	137.7	137.7
85°	72.5	79.7	87.0	94.2	101.5
87.5°	43.5	43.5	50.7	58.0	65.2
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)