

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: P547382

Luminaire Tested: **FMR-24-4-LD4-4LO-35-UNV-93-97-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: P547382
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-35-UNV-93-97-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

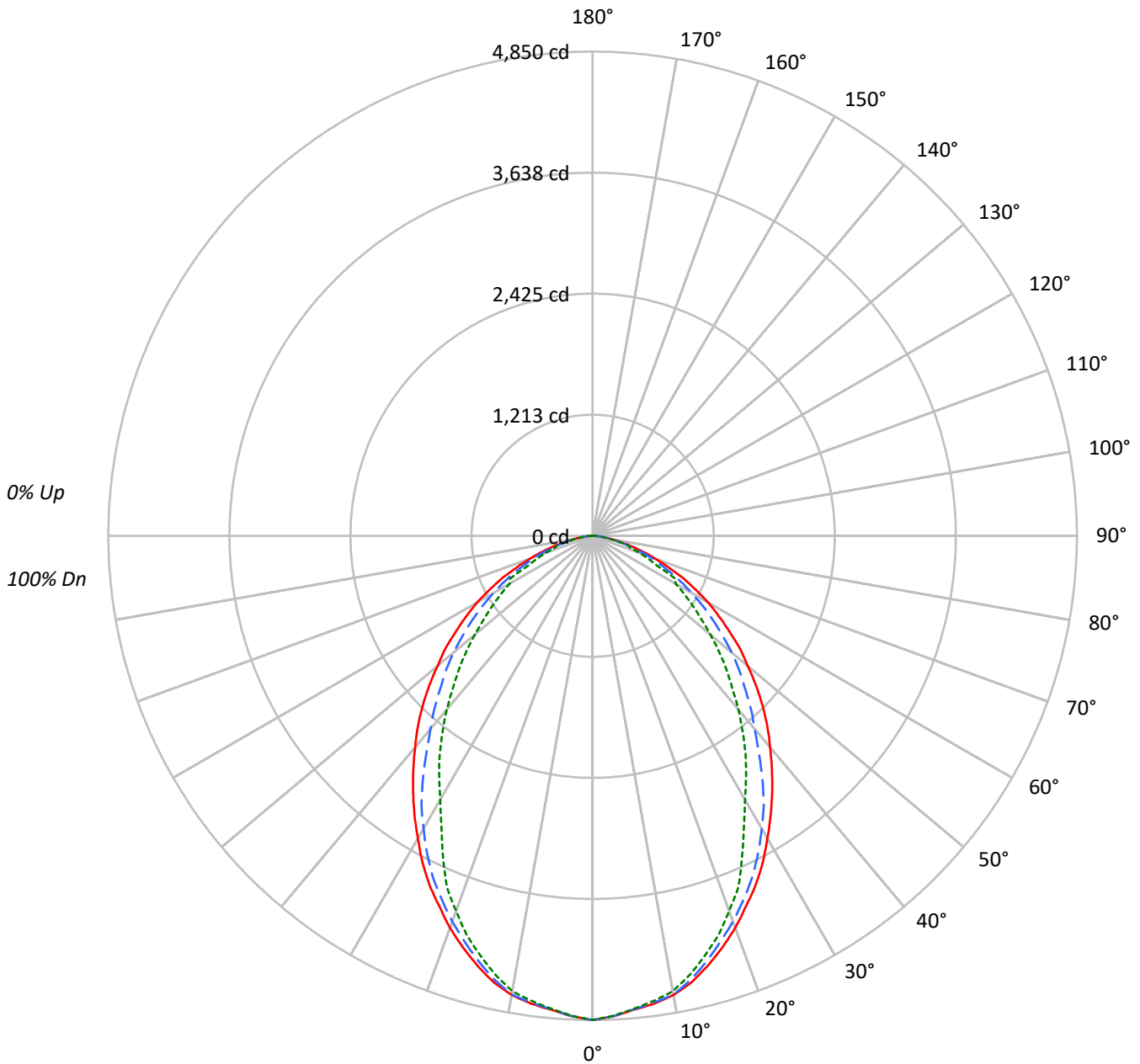
Lumens per Lamp: N/A
Luminaire Lumens: 9522.0 lumens
Efficiency: N/A
Efficacy: 101.7 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 93.6
Input Voltage (V): NR
Input Current (A_{in}): 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°	6526	6526	6526
5°	6438	6430	6422
10°	6382	6374	6328
15°	6210	6147	6061
20°	5982	5885	5725
25°	5736	5611	5261
30°	5436	5262	4739
35°	5149	4863	4384
40°	4855	4432	3989
45°	4577	4097	3606
50°	4237	3803	3216
55°	3920	3446	2881
60°	3591	3078	2580
65°	3160	2696	2285
70°	2603	2360	1941
75°	2070	1808	1895
80°	1390	1303	1216
85°	866	1039	1212



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	451.5	4.7
10°-20°	1239.1	13.0
20°-30°	1715.5	18.0
30°-40°	1829.2	19.2
40°-50°	1668.8	17.5
50°-60°	1307.3	13.7
60°-70°	852.0	8.9
70°-80°	377.5	4.0
80°-90°	81.0	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°	3406.1	35.8
0°-40°	5235.3	55.0
0°-60°	8211.4	86.2
0°-90°	9522.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9522.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4850	4850	4850	4850	4850	
5°	4766	4761	4761	4755	4755	452
15°	4458	4458	4413	4368	4351	1253
25°	3864	3841	3779	3645	3544	1774
35°	3134	3112	2961	2736	2669	1960
45°	2406	2355	2153	1974	1895	1853
55°	1671	1620	1469	1295	1228	1499
65°	992	936	847	864	718	978
75°	398	370	348	331	364	427
85°	56	62	67	73	78	78
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4850.4	4850.4	4850.4	4850.4	4850.4
2.5°	4816.7	4816.7	4816.7	4811.1	4811.1
5°	4766.3	4760.7	4760.7	4755.1	4755.1
7.5°	4727.0	4721.4	4715.8	4710.2	4699.0
10°	4670.9	4670.9	4665.3	4637.3	4631.7
12.5°	4581.2	4575.6	4553.2	4513.9	4502.7
15°	4457.9	4457.9	4413.0	4368.1	4351.3
17.5°	4323.3	4317.7	4261.6	4216.7	4194.3
20°	4177.5	4166.3	4110.2	4037.3	3998.1
22.5°	4014.9	4014.9	3947.6	3852.3	3813.0
25°	3863.5	3841.1	3779.4	3644.8	3543.9
27.5°	3689.7	3656.0	3588.7	3398.1	3280.3
30°	3499.0	3482.2	3386.9	3140.1	3050.4
32.5°	3319.6	3291.5	3190.6	2932.7	2859.8
35°	3134.5	3112.1	2960.7	2736.4	2669.1
37.5°	2949.5	2921.4	2730.8	2551.4	2467.2
40°	2764.4	2730.8	2523.3	2360.7	2271.0
42.5°	2590.6	2545.7	2343.9	2170.1	2069.1
45°	2405.6	2355.1	2153.2	1973.8	1895.3
47.5°	2220.5	2175.7	1990.6	1805.6	1715.9
50°	2024.3	1985.0	1816.8	1631.7	1536.4
52.5°	1861.6	1800.0	1637.4	1452.3	1373.8
55°	1671.0	1620.5	1469.1	1295.3	1228.0
57.5°	1497.2	1446.7	1306.5	1143.9	1087.8
60°	1334.6	1261.7	1143.9	1003.7	958.9
62.5°	1155.1	1099.0	998.1	880.4	936.4
65°	992.5	936.4	846.7	863.5	717.7
67.5°	813.1	785.0	706.5	628.0	605.6
70°	661.7	628.0	600.0	515.9	493.4
72.5°	527.1	493.4	454.2	409.3	392.5
75°	398.1	370.1	347.7	330.8	364.5
77.5°	274.8	263.5	246.7	229.9	224.3
80°	179.4	173.8	168.2	162.6	157.0
82.5°	106.5	106.5	106.5	106.5	106.5
85°	56.1	61.7	67.3	72.9	78.5
87.5°	33.6	33.6	39.3	44.9	50.5
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)