

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: P547253

Luminaire Tested: **FMR-24-4-LD4-3STD-50-UNV-93-96-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: P547253
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-LD4-3STD-50-UNV-93-96-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

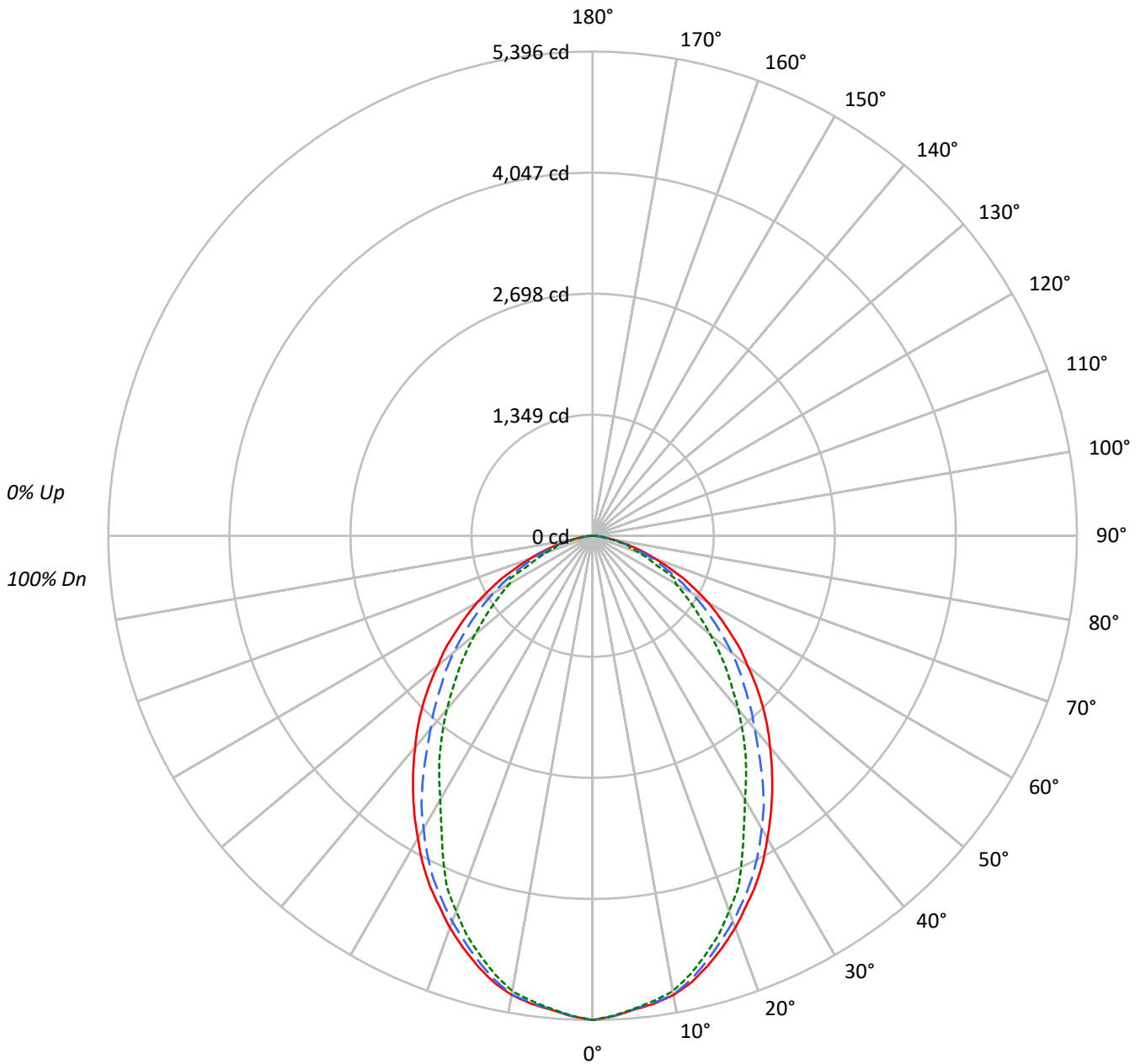
Lumens per Lamp: N/A
Luminaire Lumens: 10594.0 lumens
Efficiency: N/A
Efficacy: 106.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 99.9
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°	7261	7261	7261
5°	7162	7154	7145
10°	7100	7092	7040
15°	6909	6839	6744
20°	6655	6548	6369
25°	6381	6243	5853
30°	6048	5854	5273
35°	5728	5411	4878
40°	5402	4931	4438
45°	5093	4558	4012
50°	4714	4231	3578
55°	4361	3834	3205
60°	3996	3425	2871
65°	3515	2999	2542
70°	2896	2626	2160
75°	2302	2011	2108
80°	1547	1450	1354
85°	963	1156	1348



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	502.3	4.7
10°-20°	1378.6	13.0
20°-30°	1908.6	18.0
30°-40°	2035.1	19.2
40°-50°	1856.6	17.5
50°-60°	1454.5	13.7
60°-70°	948.0	8.9
70°-80°	420.0	4.0
80°-90°	90.2	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°	3789.6	35.8
0°-40°	5824.7	55.0
0°-60°	9135.8	86.2
0°-90°	10594.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10594.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5396	5396	5396	5396	5396	
5°	5303	5297	5297	5290	5290	503
15°	4960	4960	4910	4860	4841	1394
25°	4298	4274	4205	4055	3943	1973
35°	3487	3462	3294	3044	2970	2180
45°	2676	2620	2396	2196	2109	2062
55°	1859	1803	1634	1441	1366	1667
65°	1104	1042	942	961	798	1088
75°	443	412	387	368	406	475
85°	62	69	75	81	87	87
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5396.4	5396.4	5396.4	5396.4	5396.4
2.5°	5359.0	5359.0	5359.0	5352.8	5352.8
5°	5302.9	5296.6	5296.6	5290.4	5290.4
7.5°	5259.2	5253.0	5246.7	5240.5	5228.0
10°	5196.8	5196.8	5190.6	5159.4	5153.1
12.5°	5097.0	5090.7	5065.8	5022.1	5009.6
15°	4959.7	4959.7	4909.8	4859.9	4841.2
17.5°	4810.0	4803.8	4741.4	4691.5	4666.5
20°	4647.8	4635.3	4572.9	4491.8	4448.2
22.5°	4466.9	4466.9	4392.0	4286.0	4242.3
25°	4298.4	4273.5	4204.9	4055.1	3942.8
27.5°	4105.0	4067.6	3992.7	3780.6	3649.6
30°	3892.9	3874.2	3768.2	3493.7	3393.8
32.5°	3693.3	3662.1	3549.8	3262.8	3181.7
35°	3487.4	3462.5	3294.0	3044.5	2969.6
37.5°	3281.5	3250.3	3038.2	2838.6	2745.0
40°	3075.7	3038.2	2807.4	2626.5	2526.7
42.5°	2882.3	2832.4	2607.8	2414.4	2302.1
45°	2676.4	2620.2	2395.6	2196.0	2108.7
47.5°	2470.5	2420.6	2214.7	2008.8	1909.0
50°	2252.2	2208.5	2021.3	1815.5	1709.4
52.5°	2071.2	2002.6	1821.7	1615.8	1528.5
55°	1859.1	1803.0	1634.5	1441.1	1366.3
57.5°	1665.7	1609.6	1453.6	1272.7	1210.3
60°	1484.8	1403.7	1272.7	1116.7	1066.8
62.5°	1285.2	1222.8	1110.5	979.5	1041.9
65°	1104.2	1041.9	942.0	960.8	798.5
67.5°	904.6	873.4	786.1	698.7	673.8
70°	736.2	698.7	667.5	574.0	549.0
72.5°	586.4	549.0	505.3	455.4	436.7
75°	442.9	411.8	386.8	368.1	405.5
77.5°	305.7	293.2	274.5	255.8	249.5
80°	199.6	193.4	187.2	180.9	174.7
82.5°	118.5	118.5	118.5	118.5	118.5
85°	62.4	68.6	74.9	81.1	87.3
87.5°	37.4	37.4	43.7	49.9	56.1
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)