

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: P547353

Luminaire Tested: **FMR-24-4-LD4-4LO-35-UNV-80-86-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: P547353
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-80-86-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

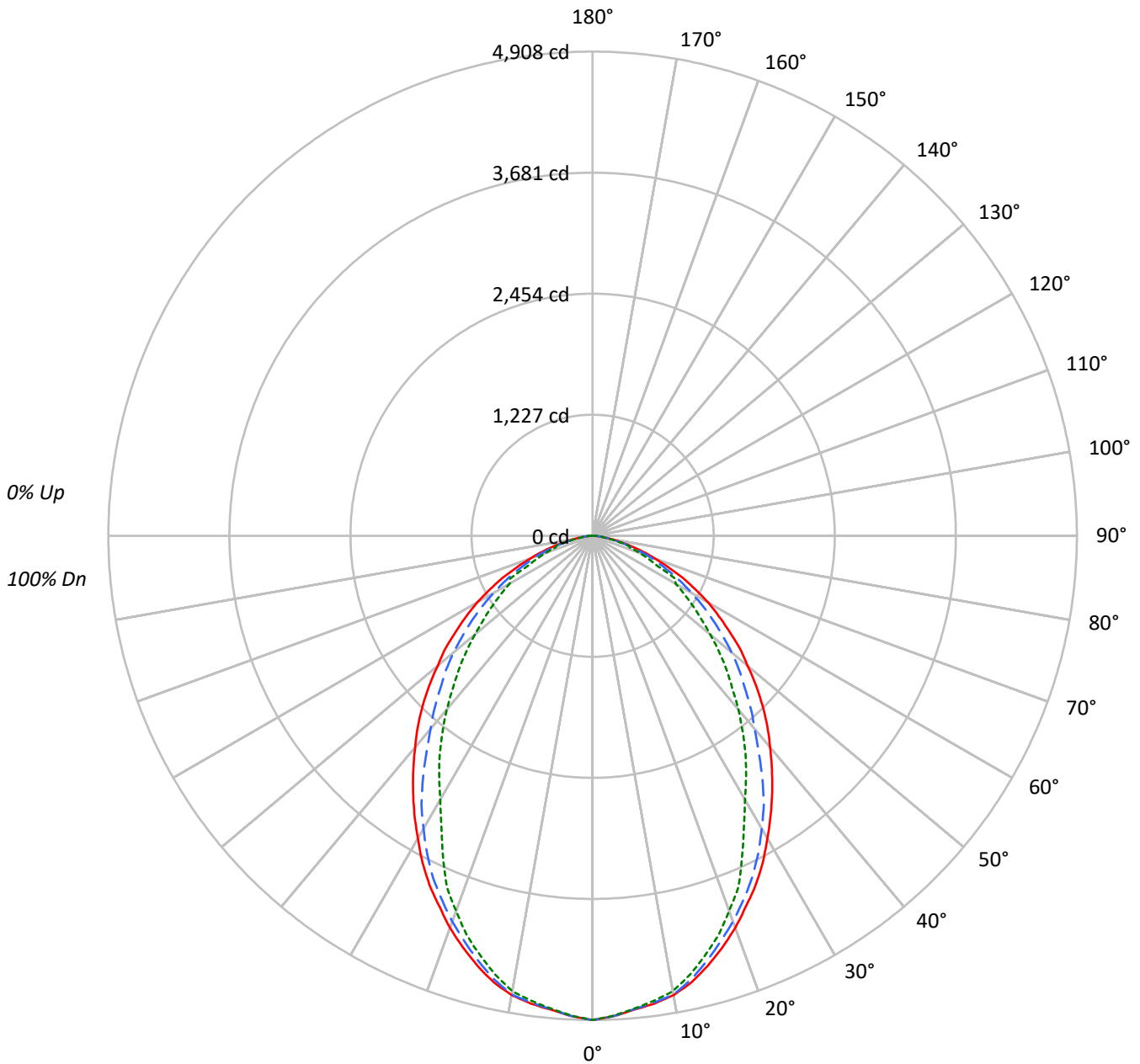
Lumens per Lamp: N/A
Luminaire Lumens: 9636.0 lumens
Efficiency: N/A
Efficacy: 102.9 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 93.6
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°	6604	6604	6604
5°	6514	6507	6499
10°	6458	6450	6404
15°	6284	6221	6134
20°	6053	5956	5793
25°	5804	5678	5324
30°	5501	5325	4796
35°	5210	4921	4437
40°	4914	4485	4037
45°	4632	4146	3650
50°	4288	3848	3255
55°	3967	3487	2915
60°	3634	3115	2611
65°	3198	2728	2312
70°	2634	2389	1965
75°	2095	1829	1917
80°	1407	1319	1231
85°	875	1051	1226



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	456.9	4.7
10°-20°	1253.9	13.0
20°-30°	1736.0	18.0
30°-40°	1851.1	19.2
40°-50°	1688.7	17.5
50°-60°	1323.0	13.7
60°-70°	862.3	8.9
70°-80°	382.0	4.0
80°-90°	82.0	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°	3446.9	35.8
0°-40°	5298.0	55.0
0°-60°	8309.7	86.2
0°-90°	9636.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9636.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4908	4908	4908	4908	4908	
5°	4823	4818	4818	4812	4812	458
15°	4511	4511	4466	4420	4403	1268
25°	3910	3887	3825	3688	3586	1795
35°	3172	3149	2996	2769	2701	1983
45°	2434	2383	2179	1997	1918	1875
55°	1691	1640	1487	1311	1243	1517
65°	1004	948	857	874	726	990
75°	403	374	352	335	369	432
85°	57	62	68	74	79	79
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4908.4	4908.4	4908.4	4908.4	4908.4
2.5°	4874.4	4874.4	4874.4	4868.7	4868.7
5°	4823.3	4817.7	4817.7	4812.0	4812.0
7.5°	4783.6	4777.9	4772.3	4766.6	4755.2
10°	4726.9	4726.9	4721.2	4692.8	4687.1
12.5°	4636.1	4630.4	4607.7	4568.0	4556.6
15°	4511.2	4511.2	4465.8	4420.4	4403.4
17.5°	4375.0	4369.4	4312.6	4267.2	4244.5
20°	4227.5	4216.2	4159.4	4085.6	4045.9
22.5°	4062.9	4062.9	3994.9	3898.4	3858.7
25°	3909.7	3887.0	3824.6	3688.4	3586.3
27.5°	3733.8	3699.8	3631.7	3438.8	3319.6
30°	3540.9	3523.9	3427.4	3177.7	3086.9
32.5°	3359.3	3330.9	3228.8	2967.8	2894.0
35°	3172.1	3149.4	2996.1	2769.2	2701.1
37.5°	2984.8	2956.4	2763.5	2581.9	2496.8
40°	2797.5	2763.5	2553.5	2389.0	2298.2
42.5°	2621.6	2576.2	2371.9	2196.0	2093.9
45°	2434.4	2383.3	2179.0	1997.4	1918.0
47.5°	2247.1	2201.7	2014.5	1827.2	1736.4
50°	2048.5	2008.8	1838.5	1651.3	1554.8
52.5°	1883.9	1821.5	1657.0	1469.7	1390.3
55°	1691.0	1639.9	1486.7	1310.8	1242.7
57.5°	1515.1	1464.0	1322.2	1157.6	1100.9
60°	1350.5	1276.8	1157.6	1015.7	970.3
62.5°	1168.9	1112.2	1010.1	890.9	947.6
65°	1004.4	947.6	856.9	873.9	726.3
67.5°	822.8	794.4	715.0	635.5	612.8
70°	669.6	635.5	607.2	522.1	499.4
72.5°	533.4	499.4	459.6	414.2	397.2
75°	402.9	374.5	351.8	334.8	368.8
77.5°	278.1	266.7	249.7	232.7	227.0
80°	181.6	175.9	170.2	164.6	158.9
82.5°	107.8	107.8	107.8	107.8	107.8
85°	56.7	62.4	68.1	73.8	79.4
87.5°	34.0	34.0	39.7	45.4	51.1
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)