

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: P547385

Luminaire Tested: **FMR-24-4-LD4-4LO-40-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: P547385
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-40-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 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

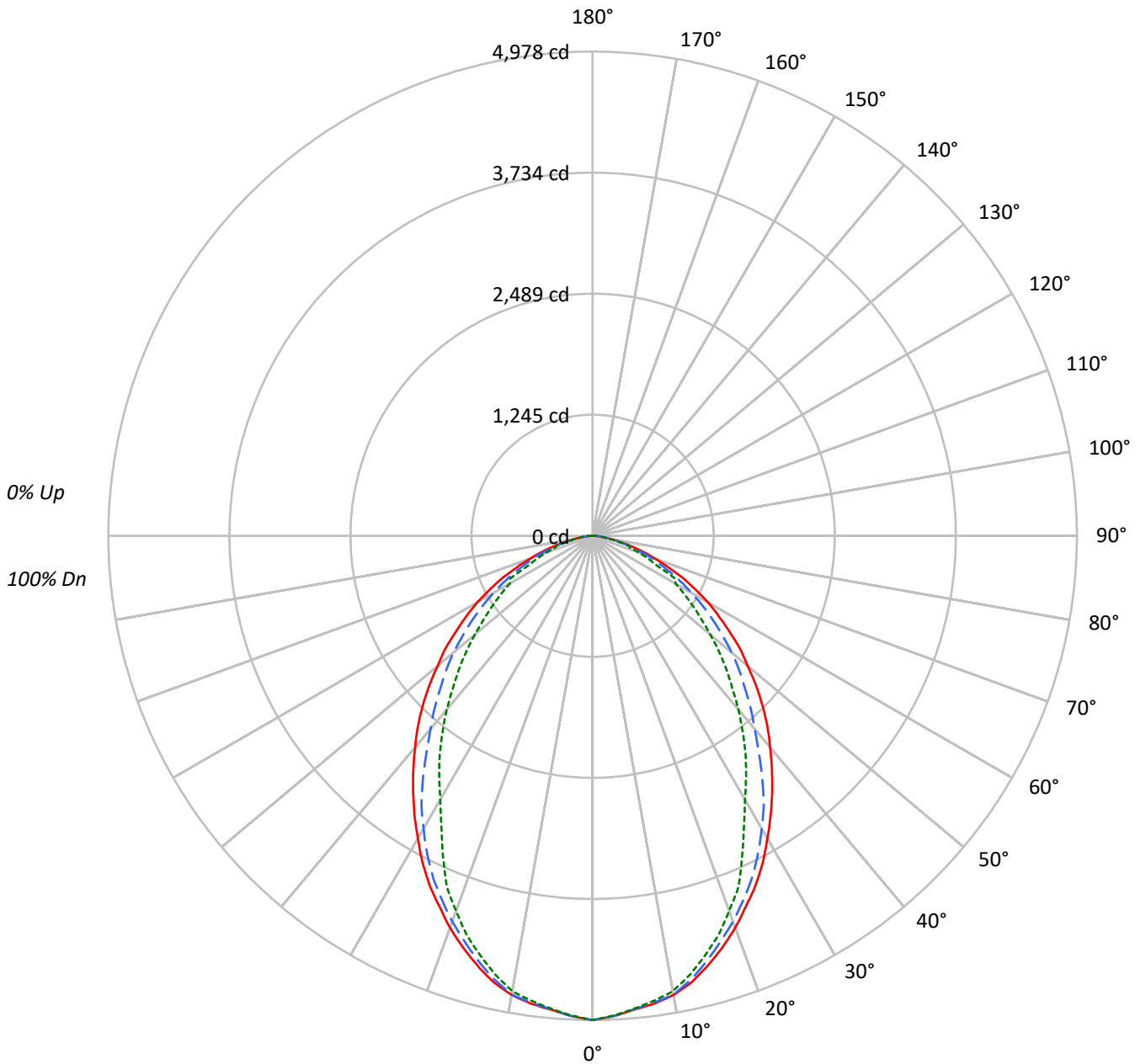
Lumens per Lamp: N/A
Luminaire Lumens: 9773.0 lumens
Efficiency: N/A
Efficacy: 104.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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°	6698	6698	6698
5°	6607	6599	6592
10°	6550	6542	6495
15°	6373	6309	6221
20°	6139	6040	5875
25°	5887	5759	5400
30°	5579	5401	4864
35°	5284	4991	4500
40°	4983	4549	4094
45°	4698	4205	3702
50°	4349	3903	3301
55°	4023	3537	2957
60°	3686	3159	2648
65°	3243	2767	2345
70°	2672	2423	1993
75°	2124	1855	1945
80°	1427	1338	1248
85°	889	1067	1244



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	463.4	4.7
10°-20°	1271.8	13.0
20°-30°	1760.7	18.0
30°-40°	1877.4	19.2
40°-50°	1712.8	17.5
50°-60°	1341.8	13.7
60°-70°	874.5	8.9
70°-80°	387.5	4.0
80°-90°	83.2	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°	3495.9	35.8
0°-40°	5373.3	55.0
0°-60°	8427.8	86.2
0°-90°	9773.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9773.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4978	4978	4978	4978	4978	
5°	4892	4886	4886	4880	4880	464
15°	4575	4575	4529	4483	4466	1286
25°	3965	3942	3879	3741	3637	1820
35°	3217	3194	3039	2808	2740	2011
45°	2469	2417	2210	2026	1945	1902
55°	1715	1663	1508	1329	1260	1538
65°	1019	961	869	886	737	1004
75°	409	380	357	340	374	438
85°	58	63	69	75	81	80
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4978.2	4978.2	4978.2	4978.2	4978.2
2.5°	4943.7	4943.7	4943.7	4937.9	4937.9
5°	4891.9	4886.2	4886.2	4880.4	4880.4
7.5°	4851.6	4845.9	4840.1	4834.4	4822.8
10°	4794.1	4794.1	4788.3	4759.5	4753.8
12.5°	4702.0	4696.2	4673.2	4632.9	4621.4
15°	4575.4	4575.4	4529.3	4483.3	4466.0
17.5°	4437.2	4431.5	4373.9	4327.9	4304.9
20°	4287.6	4276.1	4218.6	4143.7	4103.4
22.5°	4120.7	4120.7	4051.7	3953.8	3913.5
25°	3965.3	3942.3	3879.0	3740.9	3637.3
27.5°	3786.9	3752.4	3683.3	3487.6	3366.8
30°	3591.2	3574.0	3476.1	3222.9	3130.8
32.5°	3407.1	3378.3	3274.7	3010.0	2935.1
35°	3217.1	3194.1	3038.7	2808.5	2739.5
37.5°	3027.2	2998.5	2802.8	2618.6	2532.3
40°	2837.3	2802.8	2589.8	2422.9	2330.9
42.5°	2658.9	2612.9	2405.7	2227.3	2123.7
45°	2469.0	2417.2	2210.0	2025.8	1945.3
47.5°	2279.1	2233.0	2043.1	1853.2	1761.1
50°	2077.6	2037.3	1864.7	1674.8	1576.9
52.5°	1910.7	1847.4	1680.5	1490.6	1410.0
55°	1715.0	1663.2	1507.9	1329.4	1260.4
57.5°	1536.6	1484.8	1341.0	1174.1	1116.5
60°	1369.7	1294.9	1174.1	1030.2	984.1
62.5°	1185.6	1128.0	1024.4	903.6	961.1
65°	1018.7	961.1	869.0	886.3	736.7
67.5°	834.5	805.7	725.2	644.6	621.6
70°	679.1	644.6	615.8	529.5	506.5
72.5°	541.0	506.5	466.2	420.1	402.9
75°	408.6	379.8	356.8	339.6	374.1
77.5°	282.0	270.5	253.2	236.0	230.2
80°	184.2	178.4	172.7	166.9	161.1
82.5°	109.3	109.3	109.3	109.3	109.3
85°	57.6	63.3	69.1	74.8	80.6
87.5°	34.5	34.5	40.3	46.0	51.8
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)