

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: P547202

Luminaire Tested: **FMR-24-4-LD4-3STD-40-UNV-81-87-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: P547202
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-40-UNV-81-87-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

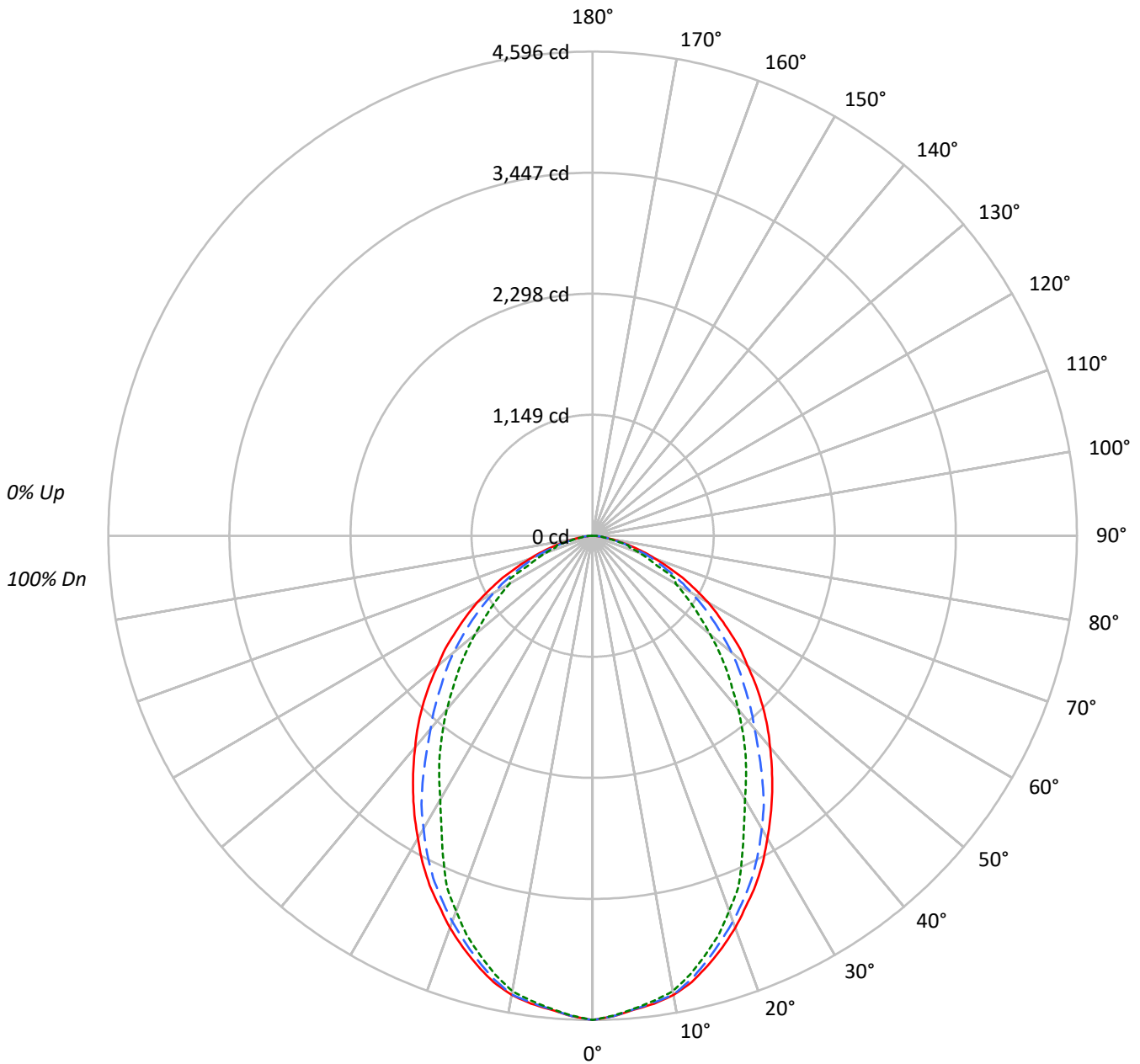
Lumens per Lamp: N/A
Luminaire Lumens: 9023.0 lumens
Efficiency: N/A
Efficacy: 90.3 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 99.9
Input Voltage (V): NR
Input Current (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°	6184	6184	6184
5°	6100	6093	6086
10°	6047	6040	5996
15°	5884	5825	5744
20°	5668	5577	5425
25°	5435	5317	4985
30°	5151	4986	4491
35°	4879	4608	4154
40°	4601	4200	3780
45°	4337	3882	3417
50°	4015	3604	3048
55°	3714	3266	2730
60°	3403	2917	2445
65°	2994	2554	2165
70°	2467	2236	1840
75°	1961	1712	1796
80°	1317	1235	1153
85°	820	985	1149



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	427.8	4.7
10°-20°	1174.2	13.0
20°-30°	1625.6	18.0
30°-40°	1733.3	19.2
40°-50°	1581.3	17.5
50°-60°	1238.8	13.7
60°-70°	807.4	8.9
70°-80°	357.7	4.0
80°-90°	76.8	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°	3227.6	35.8
0°-40°	4960.9	55.0
0°-60°	7781.1	86.2
0°-90°	9023.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9023.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4596	4596	4596	4596	4596	
5°	4516	4511	4511	4506	4506	429
15°	4224	4224	4182	4139	4123	1188
25°	3661	3640	3581	3454	3358	1681
35°	2970	2949	2806	2593	2529	1857
45°	2280	2232	2040	1870	1796	1756
55°	1583	1536	1392	1227	1164	1420
65°	940	887	802	818	680	927
75°	377	351	329	314	345	404
85°	53	58	64	69	74	74
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4596.2	4596.2	4596.2	4596.2	4596.2
2.5°	4564.3	4564.3	4564.3	4559.0	4559.0
5°	4516.5	4511.2	4511.2	4505.9	4505.9
7.5°	4479.3	4474.0	4468.7	4463.4	4452.7
10°	4426.2	4426.2	4420.8	4394.3	4389.0
12.5°	4341.1	4335.8	4314.6	4277.4	4266.8
15°	4224.2	4224.2	4181.7	4139.2	4123.3
17.5°	4096.7	4091.4	4038.3	3995.8	3974.5
20°	3958.6	3947.9	3894.8	3825.7	3788.5
22.5°	3804.5	3804.5	3740.7	3650.4	3613.2
25°	3661.0	3639.8	3581.3	3453.8	3358.1
27.5°	3496.3	3464.4	3400.7	3220.0	3108.4
30°	3315.6	3299.7	3209.4	2975.6	2890.6
32.5°	3145.6	3119.0	3023.4	2779.0	2709.9
35°	2970.3	2949.0	2805.5	2593.0	2529.2
37.5°	2794.9	2768.3	2587.7	2417.7	2337.9
40°	2619.6	2587.7	2391.1	2237.0	2152.0
42.5°	2454.8	2412.3	2221.1	2056.3	1960.7
45°	2279.5	2231.7	2040.4	1870.4	1796.0
47.5°	2104.2	2061.6	1886.3	1711.0	1625.9
50°	1918.2	1881.0	1721.6	1546.2	1455.9
52.5°	1764.1	1705.6	1551.5	1376.2	1301.8
55°	1583.4	1535.6	1392.1	1227.4	1163.7
57.5°	1418.7	1370.9	1238.1	1084.0	1030.8
60°	1264.6	1195.5	1084.0	951.1	908.6
62.5°	1094.6	1041.5	945.8	834.2	887.4
65°	940.5	887.4	802.3	818.3	680.1
67.5°	770.5	743.9	669.5	595.1	573.9
70°	627.0	595.1	568.5	488.8	467.6
72.5°	499.5	467.6	430.4	387.9	371.9
75°	377.3	350.7	329.4	313.5	345.4
77.5°	260.4	249.7	233.8	217.9	212.5
80°	170.0	164.7	159.4	154.1	148.8
82.5°	101.0	101.0	101.0	101.0	101.0
85°	53.1	58.4	63.8	69.1	74.4
87.5°	31.9	31.9	37.2	42.5	47.8
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)