

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: P546533

Luminaire Tested: **FMR-24-4-LD4-1LO-40-UNV-81-96-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: P546533
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-LD4-1LO-40-UNV-81-96-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

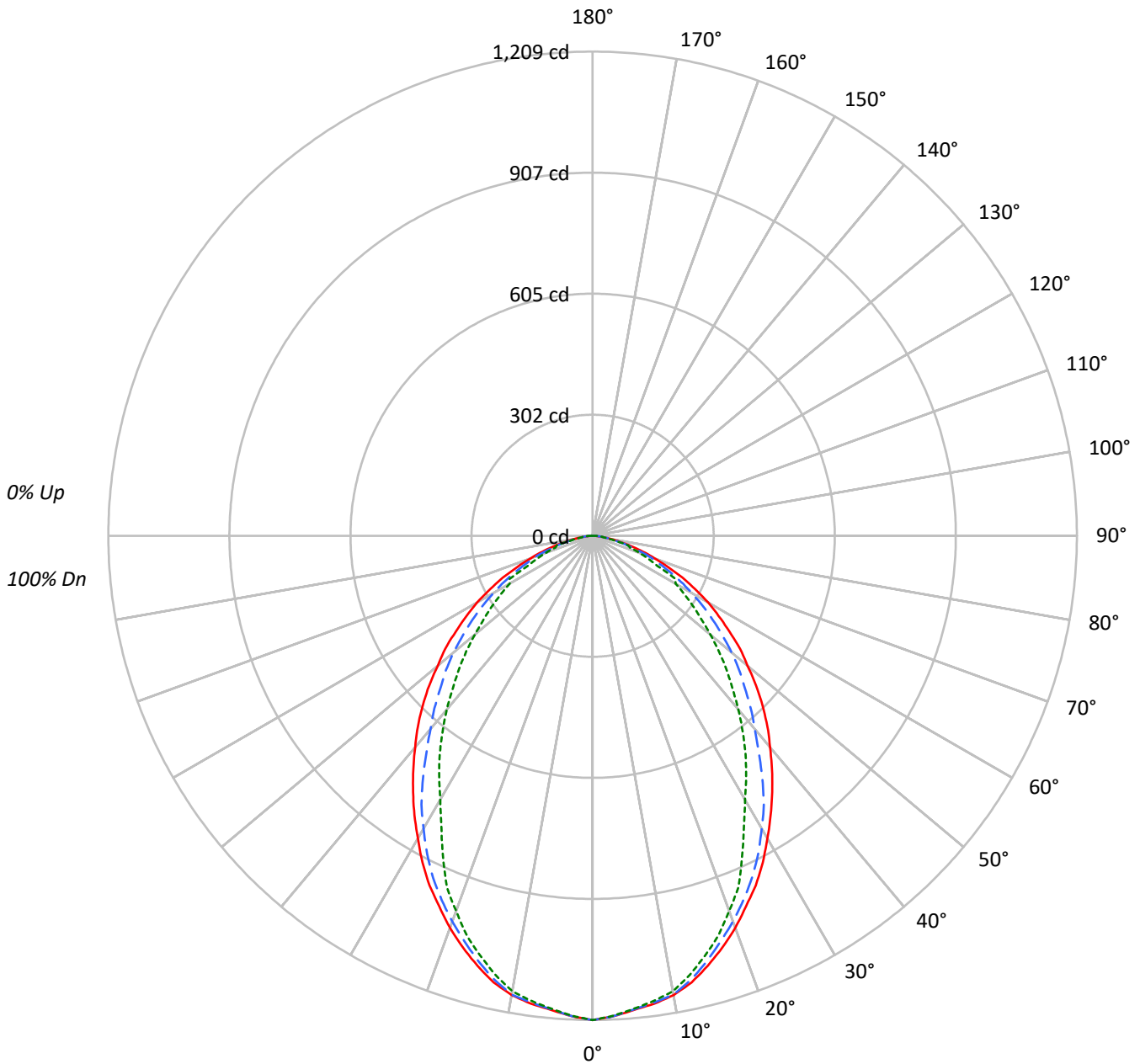
Lumens per Lamp: N/A
Luminaire Lumens: 2374.0 lumens
Efficiency: N/A
Efficacy: 101.5 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 23.4
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°	1627	1627	1627
5°	1605	1603	1601
10°	1591	1589	1578
15°	1548	1533	1511
20°	1491	1467	1427
25°	1430	1399	1312
30°	1355	1312	1182
35°	1284	1213	1093
40°	1211	1105	994
45°	1141	1021	899
50°	1056	948	802
55°	977	859	718
60°	895	767	643
65°	788	672	570
70°	649	589	484
75°	516	451	473
80°	346	325	303
85°	216	259	303



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	112.6	4.7
10°-20°	308.9	13.0
20°-30°	427.7	18.0
30°-40°	456.1	19.2
40°-50°	416.1	17.5
50°-60°	325.9	13.7
60°-70°	212.4	8.9
70°-80°	94.1	4.0
80°-90°	20.2	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°	849.2	35.8
0°-40°	1305.2	55.0
0°-60°	2047.2	86.2
0°-90°	2374.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2374.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1209	1209	1209	1209	1209	
5°	1188	1187	1187	1186	1186	113
15°	1111	1111	1100	1089	1085	312
25°	963	958	942	909	884	442
35°	782	776	738	682	666	489
45°	600	587	537	492	472	462
55°	417	404	366	323	306	374
65°	247	234	211	215	179	244
75°	99	92	87	82	91	106
85°	14	15	17	18	20	19
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1209.3	1209.3	1209.3	1209.3	1209.3
2.5°	1200.9	1200.9	1200.9	1199.5	1199.5
5°	1188.3	1186.9	1186.9	1185.5	1185.5
7.5°	1178.5	1177.1	1175.7	1174.3	1171.5
10°	1164.5	1164.5	1163.1	1156.2	1154.8
12.5°	1142.2	1140.8	1135.2	1125.4	1122.6
15°	1111.4	1111.4	1100.2	1089.1	1084.9
17.5°	1077.9	1076.5	1062.5	1051.3	1045.7
20°	1041.5	1038.7	1024.7	1006.6	996.8
22.5°	1001.0	1001.0	984.2	960.4	950.7
25°	963.2	957.6	942.3	908.7	883.5
27.5°	919.9	911.5	894.7	847.2	817.8
30°	872.4	868.2	844.4	782.9	760.5
32.5°	827.6	820.6	795.5	731.2	713.0
35°	781.5	775.9	738.2	682.2	665.5
37.5°	735.4	728.4	680.8	636.1	615.1
40°	689.2	680.8	629.1	588.6	566.2
42.5°	645.9	634.7	584.4	541.0	515.9
45°	599.7	587.2	536.8	492.1	472.5
47.5°	553.6	542.4	496.3	450.2	427.8
50°	504.7	494.9	453.0	406.8	383.1
52.5°	464.1	448.8	408.2	362.1	342.5
55°	416.6	404.0	366.3	322.9	306.2
57.5°	373.3	360.7	325.7	285.2	271.2
60°	332.7	314.6	285.2	250.2	239.1
62.5°	288.0	274.0	248.8	219.5	233.5
65°	247.4	233.5	211.1	215.3	178.9
67.5°	202.7	195.7	176.2	156.6	151.0
70°	165.0	156.6	149.6	128.6	123.0
72.5°	131.4	123.0	113.2	102.1	97.9
75°	99.3	92.3	86.7	82.5	90.9
77.5°	68.5	65.7	61.5	57.3	55.9
80°	44.7	43.3	41.9	40.5	39.1
82.5°	26.6	26.6	26.6	26.6	26.6
85°	14.0	15.4	16.8	18.2	19.6
87.5°	8.4	8.4	9.8	11.2	12.6
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)