

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: P546531

Luminaire Tested: **FMR-24-4-LD4-1LO-40-UNV-81-88-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: P546531
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-81-88-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

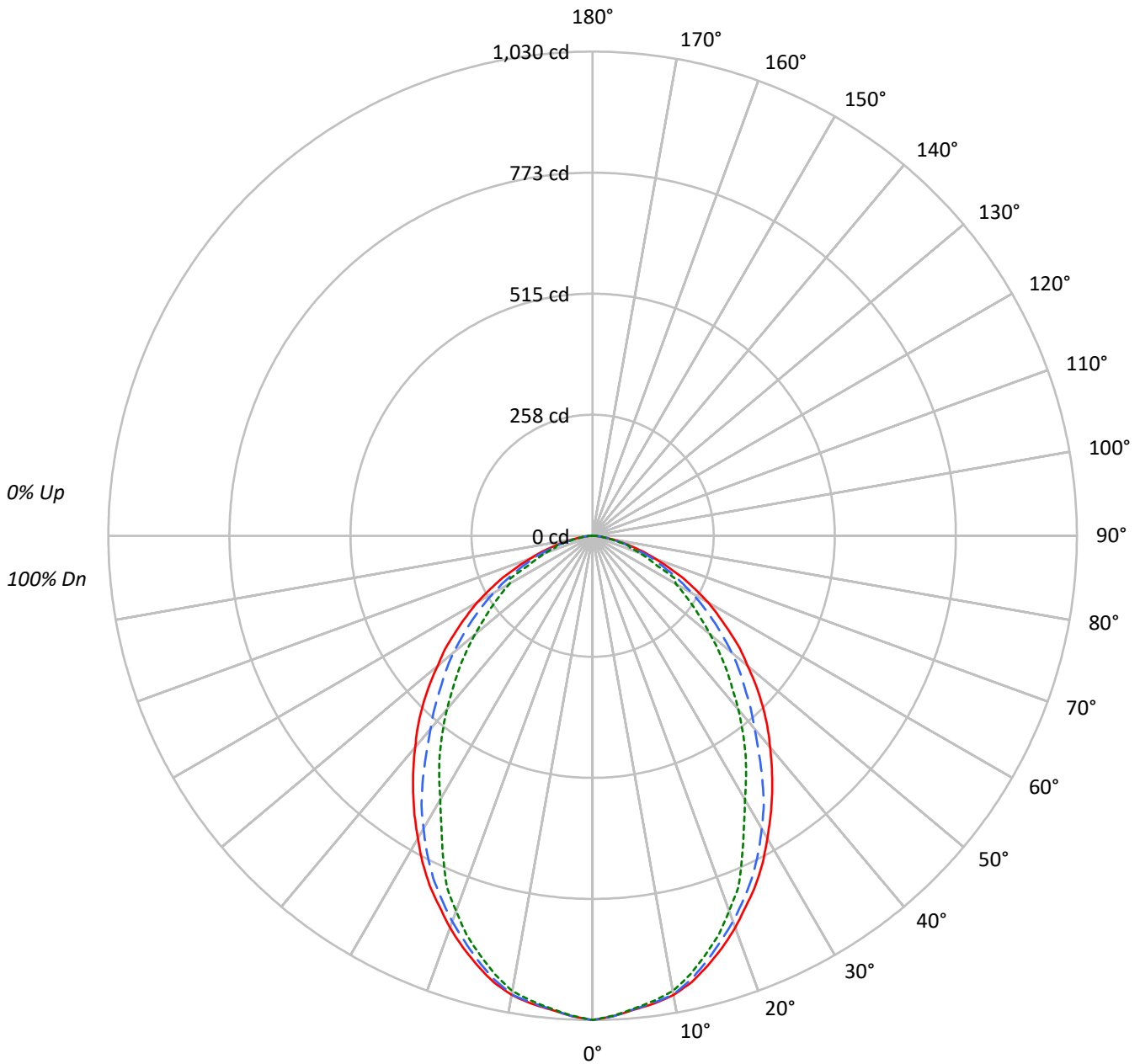
Lumens per Lamp: N/A
Luminaire Lumens: 2022.0 lumens
Efficiency: N/A
Efficacy: 86.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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°	1386	1386	1386
5°	1367	1365	1364
10°	1355	1354	1344
15°	1319	1305	1287
20°	1270	1250	1216
25°	1218	1192	1117
30°	1154	1117	1006
35°	1093	1033	931
40°	1031	941	847
45°	972	870	766
50°	900	808	683
55°	832	732	612
60°	763	654	548
65°	671	572	485
70°	553	501	412
75°	439	384	402
80°	295	277	258
85°	184	221	258



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	95.9	4.7
10°-20°	263.1	13.0
20°-30°	364.3	18.0
30°-40°	388.4	19.2
40°-50°	354.4	17.5
50°-60°	277.6	13.7
60°-70°	180.9	8.9
70°-80°	80.2	4.0
80°-90°	17.2	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°	723.3	35.8
0°-40°	1111.7	55.0
0°-60°	1743.7	86.2
0°-90°	2022.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2022.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1030	1030	1030	1030	1030	
5°	1012	1011	1011	1010	1010	96
15°	947	947	937	928	924	266
25°	820	816	803	774	752	377
35°	666	661	629	581	567	416
45°	511	500	457	419	402	393
55°	355	344	312	275	261	318
65°	211	199	180	183	152	208
75°	84	79	74	70	77	91
85°	12	13	14	16	17	16
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1030.0	1030.0	1030.0	1030.0	1030.0
2.5°	1022.8	1022.8	1022.8	1021.6	1021.6
5°	1012.1	1010.9	1010.9	1009.7	1009.7
7.5°	1003.8	1002.6	1001.4	1000.2	997.8
10°	991.9	991.9	990.7	984.7	983.5
12.5°	972.8	971.6	966.9	958.5	956.2
15°	946.6	946.6	937.1	927.6	924.0
17.5°	918.1	916.9	905.0	895.4	890.7
20°	887.1	884.7	872.8	857.3	849.0
22.5°	852.6	852.6	838.3	818.0	809.7
25°	820.4	815.6	802.6	774.0	752.5
27.5°	783.5	776.4	762.1	721.6	696.6
30°	743.0	739.4	719.2	666.8	647.8
32.5°	704.9	699.0	677.5	622.8	607.3
35°	665.6	660.9	628.7	581.1	566.8
37.5°	626.3	620.4	579.9	541.8	523.9
40°	587.0	579.9	535.8	501.3	482.2
42.5°	550.1	540.6	497.7	460.8	439.4
45°	510.8	500.1	457.2	419.1	402.5
47.5°	471.5	462.0	422.7	383.4	364.4
50°	429.9	421.5	385.8	346.5	326.3
52.5°	395.3	382.2	347.7	308.4	291.7
55°	354.8	344.1	312.0	275.1	260.8
57.5°	317.9	307.2	277.4	242.9	231.0
60°	283.4	267.9	242.9	213.1	203.6
62.5°	245.3	233.4	211.9	186.9	198.9
65°	210.8	198.9	179.8	183.4	152.4
67.5°	172.7	166.7	150.0	133.4	128.6
70°	140.5	133.4	127.4	109.5	104.8
72.5°	111.9	104.8	96.4	86.9	83.4
75°	84.5	78.6	73.8	70.3	77.4
77.5°	58.3	56.0	52.4	48.8	47.6
80°	38.1	36.9	35.7	34.5	33.3
82.5°	22.6	22.6	22.6	22.6	22.6
85°	11.9	13.1	14.3	15.5	16.7
87.5°	7.1	7.1	8.3	9.5	10.7
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)