

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: P546573

Luminaire Tested: **FMR-24-4-LD4-1LO-50-UNV-82-96-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: P546573
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-50-UNV-82-96-EDD
Description: 2X4 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

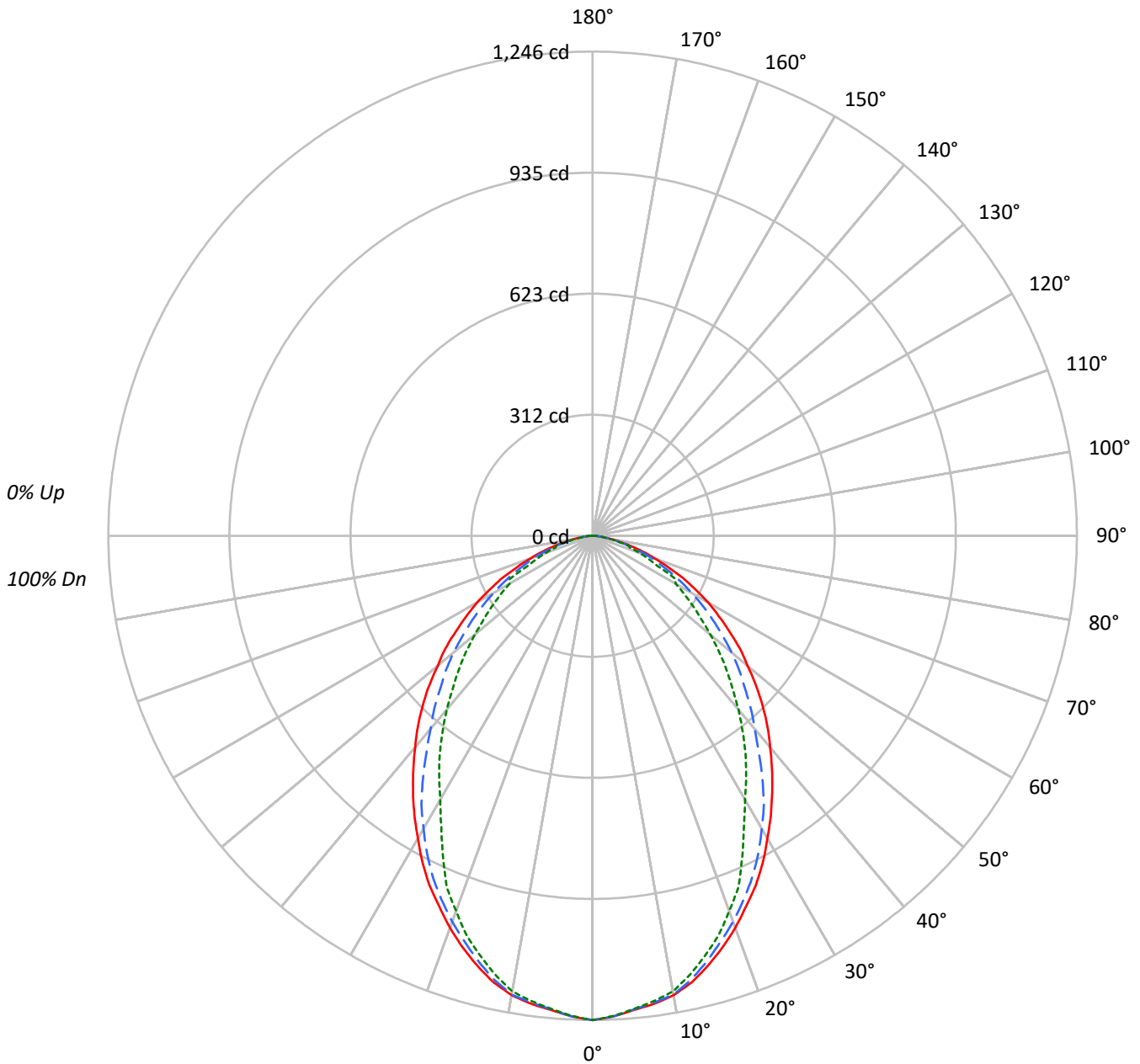
Lumens per Lamp: N/A
Luminaire Lumens: 2447.0 lumens
Efficiency: N/A
Efficacy: 104.6 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	1677	1677	1677
5°	1654	1652	1650
10°	1640	1638	1626
15°	1596	1580	1558
20°	1537	1512	1471
25°	1474	1442	1352
30°	1397	1352	1218
35°	1323	1250	1127
40°	1248	1139	1025
45°	1176	1053	927
50°	1089	977	826
55°	1007	886	740
60°	923	791	663
65°	812	693	587
70°	669	607	499
75°	532	464	487
80°	357	335	312
85°	222	267	312



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	116.0	4.7
10°-20°	318.4	13.0
20°-30°	440.9	18.0
30°-40°	470.1	19.2
40°-50°	428.8	17.5
50°-60°	336.0	13.7
60°-70°	219.0	8.9
70°-80°	97.0	4.0
80°-90°	20.8	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°	875.3	35.8
0°-40°	1345.4	55.0
0°-60°	2110.2	86.2
0°-90°	2447.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2447.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1246	1246	1246	1246	1246	
5°	1225	1223	1223	1222	1222	116
15°	1146	1146	1134	1122	1118	322
25°	993	987	971	937	911	456
35°	806	800	761	703	686	504
45°	618	605	553	507	487	476
55°	429	416	378	333	316	385
65°	255	241	218	222	184	251
75°	102	95	89	85	94	110
85°	14	16	17	19	20	20
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1246.5	1246.5	1246.5	1246.5	1246.5
2.5°	1237.8	1237.8	1237.8	1236.4	1236.4
5°	1224.9	1223.4	1223.4	1222.0	1222.0
7.5°	1214.8	1213.3	1211.9	1210.4	1207.6
10°	1200.4	1200.4	1198.9	1191.7	1190.3
12.5°	1177.3	1175.9	1170.1	1160.0	1157.1
15°	1145.6	1145.6	1134.1	1122.5	1118.2
17.5°	1111.0	1109.6	1095.2	1083.6	1077.9
20°	1073.5	1070.7	1056.3	1037.5	1027.4
22.5°	1031.8	1031.8	1014.5	990.0	979.9
25°	992.9	987.1	971.2	936.7	910.7
27.5°	948.2	939.5	922.2	873.2	843.0
30°	899.2	894.9	870.4	807.0	783.9
32.5°	853.1	845.9	819.9	753.6	734.9
35°	805.5	799.8	760.9	703.2	685.9
37.5°	758.0	750.8	701.8	655.7	634.0
40°	710.4	701.8	648.5	606.7	583.6
42.5°	665.7	654.2	602.3	557.7	531.7
45°	618.2	605.2	553.3	507.2	487.1
47.5°	570.6	559.1	511.6	464.0	440.9
50°	520.2	510.1	466.9	419.3	394.8
52.5°	478.4	462.6	420.8	373.2	353.0
55°	429.4	416.5	377.5	332.9	315.6
57.5°	384.7	371.8	335.8	294.0	279.6
60°	343.0	324.2	294.0	257.9	246.4
62.5°	296.8	282.4	256.5	226.2	240.6
65°	255.1	240.6	217.6	221.9	184.4
67.5°	208.9	201.7	181.6	161.4	155.6
70°	170.0	161.4	154.2	132.6	126.8
72.5°	135.5	126.8	116.7	105.2	100.9
75°	102.3	95.1	89.3	85.0	93.7
77.5°	70.6	67.7	63.4	59.1	57.6
80°	46.1	44.7	43.2	41.8	40.3
82.5°	27.4	27.4	27.4	27.4	27.4
85°	14.4	15.9	17.3	18.7	20.2
87.5°	8.6	8.6	10.1	11.5	13.0
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)