

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: P547077

Luminaire Tested: **FMR-24-4-LD4-3LO-35-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: P547077
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-LD4-3LO-35-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 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

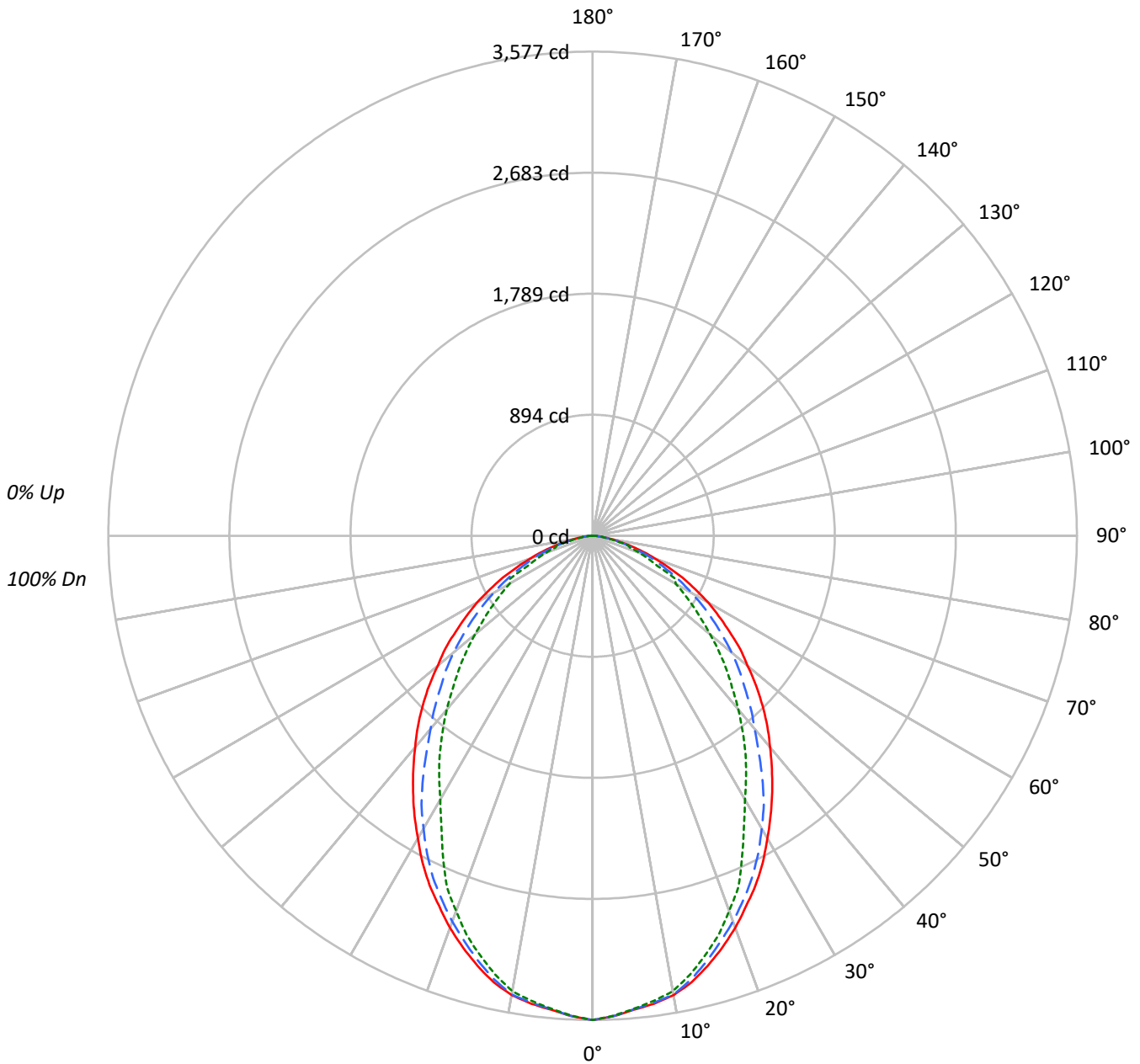
Lumens per Lamp: N/A
Luminaire Lumens: 7023.0 lumens
Efficiency: N/A
Efficacy: 100.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 70.2
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°	4813	4813	4813
5°	4748	4742	4737
10°	4707	4701	4667
15°	4580	4534	4470
20°	4412	4341	4222
25°	4230	4138	3880
30°	4009	3881	3495
35°	3797	3587	3234
40°	3581	3269	2942
45°	3376	3022	2660
50°	3125	2805	2372
55°	2891	2542	2125
60°	2649	2270	1903
65°	2330	1988	1685
70°	1920	1741	1432
75°	1526	1333	1397
80°	1025	962	897
85°	639	766	894



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	333.0	4.7
10°-20°	913.9	13.0
20°-30°	1265.3	18.0
30°-40°	1349.1	19.2
40°-50°	1230.8	17.5
50°-60°	964.2	13.7
60°-70°	628.4	8.9
70°-80°	278.4	4.0
80°-90°	59.8	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°	2512.2	35.8
0°-40°	3861.3	55.0
0°-60°	6056.4	86.2
0°-90°	7023.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7023.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3577	3577	3577	3577	3577	
5°	3515	3511	3511	3507	3507	334
15°	3288	3288	3255	3222	3209	924
25°	2850	2833	2788	2688	2614	1308
35°	2312	2295	2184	2018	1969	1445
45°	1774	1737	1588	1456	1398	1367
55°	1232	1195	1084	955	906	1105
65°	732	691	624	637	529	721
75°	294	273	256	244	269	315
85°	41	46	50	54	58	57
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3577.4	3577.4	3577.4	3577.4	3577.4
2.5°	3552.6	3552.6	3552.6	3548.5	3548.5
5°	3515.4	3511.3	3511.3	3507.1	3507.1
7.5°	3486.4	3482.3	3478.2	3474.0	3465.8
10°	3445.1	3445.1	3440.9	3420.3	3416.1
12.5°	3378.9	3374.8	3358.2	3329.3	3321.0
15°	3287.9	3287.9	3254.8	3221.7	3209.3
17.5°	3188.7	3184.5	3143.2	3110.1	3093.5
20°	3081.1	3072.9	3031.5	2977.7	2948.8
22.5°	2961.2	2961.2	2911.6	2841.3	2812.3
25°	2849.5	2833.0	2787.5	2688.2	2613.8
27.5°	2721.3	2696.5	2646.9	2506.3	2419.4
30°	2580.7	2568.3	2498.0	2316.0	2249.8
32.5°	2448.4	2427.7	2353.2	2163.0	2109.2
35°	2311.9	2295.3	2183.7	2018.2	1968.6
37.5°	2175.4	2154.7	2014.1	1881.8	1819.7
40°	2038.9	2014.1	1861.1	1741.2	1675.0
42.5°	1910.7	1877.6	1728.7	1600.5	1526.1
45°	1774.2	1737.0	1588.1	1455.8	1397.9
47.5°	1637.8	1604.7	1468.2	1331.7	1265.5
50°	1493.0	1464.1	1340.0	1203.5	1133.2
52.5°	1373.1	1327.6	1207.6	1071.2	1013.3
55°	1232.5	1195.2	1083.6	955.4	905.7
57.5°	1104.2	1067.0	963.6	843.7	802.3
60°	984.3	930.5	843.7	740.3	707.2
62.5°	852.0	810.6	736.2	649.3	690.7
65°	732.0	690.7	624.5	636.9	529.4
67.5°	599.7	579.0	521.1	463.2	446.7
70°	488.0	463.2	442.5	380.5	363.9
72.5°	388.8	363.9	335.0	301.9	289.5
75°	293.6	273.0	256.4	244.0	268.8
77.5°	202.7	194.4	182.0	169.6	165.4
80°	132.3	128.2	124.1	119.9	115.8
82.5°	78.6	78.6	78.6	78.6	78.6
85°	41.4	45.5	49.6	53.8	57.9
87.5°	24.8	24.8	29.0	33.1	37.2
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)