

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: P547213

Luminaire Tested: **FMR-24-4-LD4-3STD-40-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: P547213
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-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 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

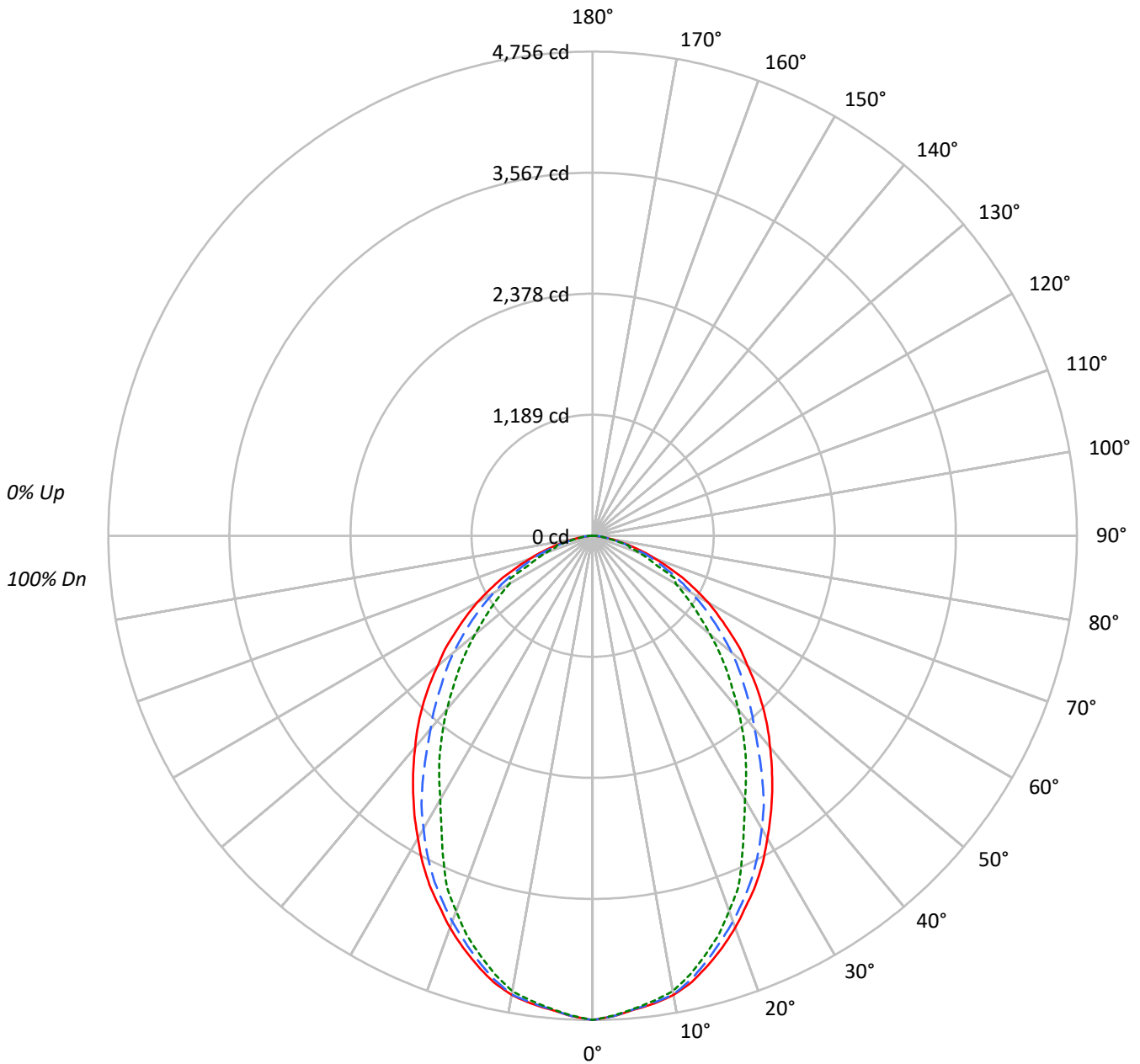
Lumens per Lamp: N/A
Luminaire Lumens: 9337.0 lumens
Efficiency: N/A
Efficacy: 93.5 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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°	6399	6399	6399
5°	6312	6305	6298
10°	6258	6250	6205
15°	6089	6028	5943
20°	5865	5771	5613
25°	5624	5502	5159
30°	5331	5160	4647
35°	5049	4769	4299
40°	4761	4346	3911
45°	4488	4018	3536
50°	4155	3729	3154
55°	3844	3379	2825
60°	3521	3018	2530
65°	3098	2643	2241
70°	2552	2314	1904
75°	2030	1772	1858
80°	1363	1278	1193
85°	849	1019	1189



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	442.7	4.7
10°-20°	1215.0	13.0
20°-30°	1682.1	18.0
30°-40°	1793.7	19.2
40°-50°	1636.3	17.5
50°-60°	1281.9	13.7
60°-70°	835.5	8.9
70°-80°	370.2	4.0
80°-90°	79.5	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°	3339.9	35.8
0°-40°	5133.6	55.0
0°-60°	8051.8	86.2
0°-90°	9337.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9337.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4756	4756	4756	4756	4756	
5°	4674	4668	4668	4663	4663	444
15°	4371	4371	4327	4283	4267	1229
25°	3788	3766	3706	3574	3475	1739
35°	3074	3052	2903	2683	2617	1922
45°	2359	2309	2111	1935	1858	1817
55°	1638	1589	1441	1270	1204	1470
65°	973	918	830	847	704	959
75°	390	363	341	324	357	418
85°	55	60	66	72	77	76
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4756.1	4756.1	4756.1	4756.1	4756.1
2.5°	4723.2	4723.2	4723.2	4717.7	4717.7
5°	4673.7	4668.2	4668.2	4662.7	4662.7
7.5°	4635.2	4629.7	4624.2	4618.7	4607.7
10°	4580.2	4580.2	4574.7	4547.2	4541.7
12.5°	4492.2	4486.7	4464.7	4426.2	4415.2
15°	4371.3	4371.3	4327.3	4283.3	4266.8
17.5°	4239.3	4233.8	4178.8	4134.8	4112.8
20°	4096.3	4085.3	4030.4	3958.9	3920.4
22.5°	3936.9	3936.9	3870.9	3777.4	3738.9
25°	3788.4	3766.4	3705.9	3574.0	3475.0
27.5°	3618.0	3585.0	3519.0	3332.0	3216.6
30°	3431.0	3414.5	3321.1	3079.1	2991.1
32.5°	3255.1	3227.6	3128.6	2875.7	2804.2
35°	3073.6	3051.6	2903.2	2683.2	2617.3
37.5°	2892.2	2864.7	2677.7	2501.8	2419.3
40°	2710.7	2677.7	2474.3	2314.8	2226.9
42.5°	2540.3	2496.3	2298.3	2127.9	2028.9
45°	2358.8	2309.3	2111.4	1935.4	1858.5
47.5°	2177.4	2133.4	1951.9	1770.5	1682.5
50°	1984.9	1946.4	1781.5	1600.0	1506.6
52.5°	1825.5	1765.0	1605.5	1424.1	1347.1
55°	1638.5	1589.0	1440.6	1270.1	1204.2
57.5°	1468.1	1418.6	1281.1	1121.7	1066.7
60°	1308.6	1237.1	1121.7	984.2	940.2
62.5°	1132.7	1077.7	978.7	863.3	918.2
65°	973.2	918.2	830.3	846.8	703.8
67.5°	797.3	769.8	692.8	615.8	593.8
70°	648.8	615.8	588.3	505.9	483.9
72.5°	516.9	483.9	445.4	401.4	384.9
75°	390.4	362.9	340.9	324.4	357.4
77.5°	269.4	258.4	241.9	225.4	219.9
80°	175.9	170.5	165.0	159.5	154.0
82.5°	104.5	104.5	104.5	104.5	104.5
85°	55.0	60.5	66.0	71.5	77.0
87.5°	33.0	33.0	38.5	44.0	49.5
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)