

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: P547212

Luminaire Tested: **FMR-24-4-LD4-3STD-40-UNV-82-94-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: P547212
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-82-94-EDD
Description: 2X4 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

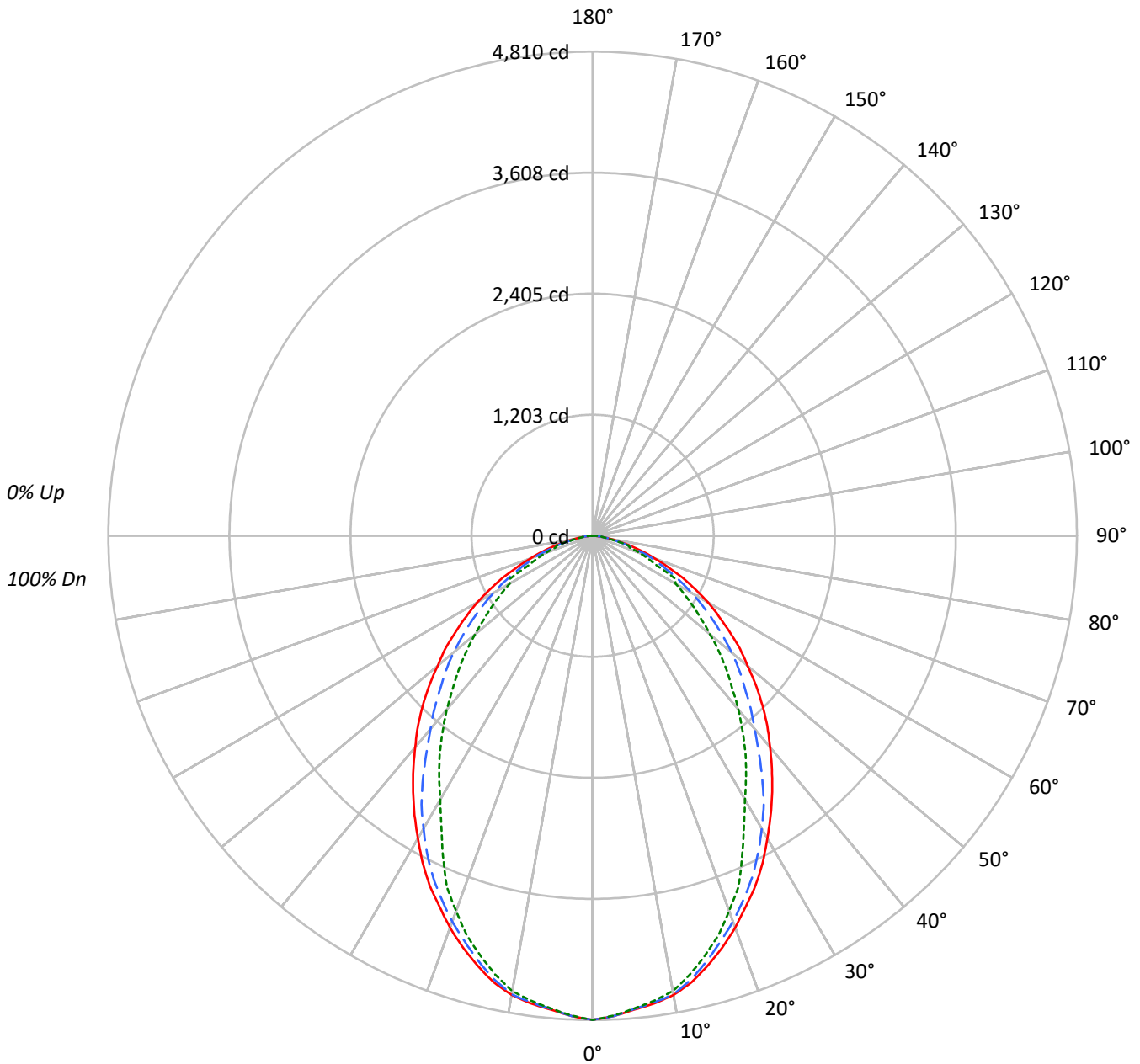
Lumens per Lamp: N/A
Luminaire Lumens: 9442.0 lumens
Efficiency: N/A
Efficacy: 94.5 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	6471	6471	6471
5°	6383	6376	6368
10°	6328	6320	6275
15°	6157	6095	6010
20°	5931	5836	5677
25°	5687	5564	5217
30°	5391	5218	4699
35°	5105	4822	4347
40°	4815	4395	3955
45°	4539	4063	3576
50°	4202	3771	3189
55°	3887	3417	2856
60°	3561	3052	2559
65°	3133	2673	2266
70°	2581	2340	1925
75°	2052	1792	1879
80°	1378	1292	1206
85°	858	1030	1201



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	447.7	4.7
10°-20°	1228.7	13.0
20°-30°	1701.1	18.0
30°-40°	1813.8	19.2
40°-50°	1654.7	17.5
50°-60°	1296.3	13.7
60°-70°	844.9	8.9
70°-80°	374.3	4.0
80°-90°	80.4	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°	3377.5	35.8
0°-40°	5191.3	55.0
0°-60°	8142.4	86.2
0°-90°	9442.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9442.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4810	4810	4810	4810	4810	
5°	4726	4721	4721	4715	4715	449
15°	4420	4420	4376	4331	4315	1243
25°	3831	3809	3748	3614	3514	1759
35°	3108	3086	2936	2713	2647	1943
45°	2385	2335	2135	1957	1879	1837
55°	1657	1607	1457	1284	1218	1486
65°	984	929	840	856	712	970
75°	395	367	345	328	361	423
85°	56	61	67	72	78	77
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4809.6	4809.6	4809.6	4809.6	4809.6
2.5°	4776.3	4776.3	4776.3	4770.7	4770.7
5°	4726.2	4720.7	4720.7	4715.1	4715.1
7.5°	4687.3	4681.7	4676.2	4670.6	4659.5
10°	4631.7	4631.7	4626.1	4598.3	4592.8
12.5°	4542.7	4537.2	4514.9	4476.0	4464.9
15°	4420.4	4420.4	4375.9	4331.4	4314.8
17.5°	4287.0	4281.4	4225.8	4181.3	4159.1
20°	4142.4	4131.3	4075.7	4003.4	3964.5
22.5°	3981.1	3981.1	3914.4	3819.9	3781.0
25°	3831.0	3808.8	3747.6	3614.2	3514.1
27.5°	3658.7	3625.3	3558.6	3369.5	3252.8
30°	3469.6	3452.9	3358.4	3113.7	3024.8
32.5°	3291.7	3263.9	3163.8	2908.0	2835.7
35°	3108.2	3085.9	2935.8	2713.4	2646.7
37.5°	2924.7	2896.9	2707.8	2529.9	2446.5
40°	2741.2	2707.8	2502.1	2340.9	2251.9
42.5°	2568.8	2524.4	2324.2	2151.8	2051.7
45°	2385.4	2335.3	2135.1	1957.2	1879.4
47.5°	2201.9	2157.4	1973.9	1790.4	1701.4
50°	2007.3	1968.3	1801.5	1618.0	1523.5
52.5°	1846.0	1784.8	1623.6	1440.1	1362.3
55°	1657.0	1606.9	1456.8	1284.4	1217.7
57.5°	1484.6	1434.5	1295.5	1134.3	1078.7
60°	1323.3	1251.1	1134.3	995.3	950.8
62.5°	1145.4	1089.8	989.7	873.0	928.6
65°	984.2	928.6	839.6	856.3	711.7
67.5°	806.2	778.4	700.6	622.7	600.5
70°	656.1	622.7	594.9	511.5	489.3
72.5°	522.7	489.3	450.4	405.9	389.2
75°	394.8	367.0	344.7	328.1	361.4
77.5°	272.5	261.3	244.7	228.0	222.4
80°	177.9	172.4	166.8	161.2	155.7
82.5°	105.6	105.6	105.6	105.6	105.6
85°	55.6	61.2	66.7	72.3	77.8
87.5°	33.4	33.4	38.9	44.5	50.0
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)