

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: P547218

Luminaire Tested: **FMR-24-4-LD4-3STD-40-UNV-93-87-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: P547218
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-93-87-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

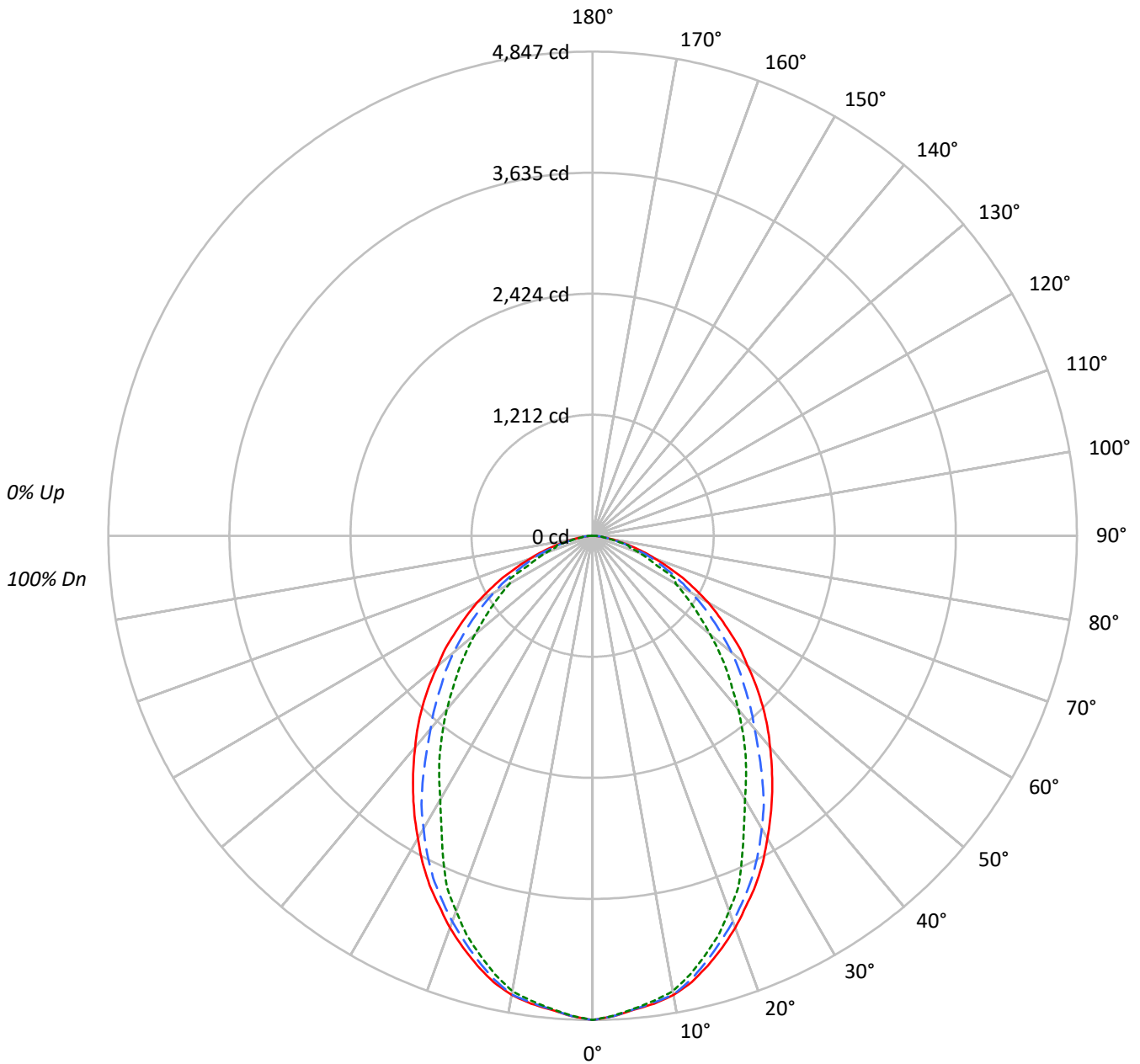
Lumens per Lamp: N/A
Luminaire Lumens: 9516.0 lumens
Efficiency: N/A
Efficacy: 95.3 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	6522	6522	6522
5°	6433	6426	6418
10°	6378	6370	6324
15°	6206	6143	6057
20°	5978	5881	5721
25°	5732	5607	5258
30°	5433	5259	4736
35°	5145	4860	4381
40°	4852	4429	3986
45°	4574	4095	3604
50°	4235	3800	3214
55°	3917	3444	2879
60°	3589	3076	2579
65°	3158	2694	2284
70°	2602	2359	1940
75°	2069	1806	1893
80°	1389	1303	1216
85°	865	1037	1212



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	451.2	4.7
10°-20°	1238.3	13.0
20°-30°	1714.4	18.0
30°-40°	1828.0	19.2
40°-50°	1667.7	17.5
50°-60°	1306.5	13.7
60°-70°	851.5	8.9
70°-80°	377.3	4.0
80°-90°	81.0	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°	3404.0	35.8
0°-40°	5232.0	55.0
0°-60°	8206.2	86.2
0°-90°	9516.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9516.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4847	4847	4847	4847	4847	
5°	4763	4758	4758	4752	4752	452
15°	4455	4455	4410	4365	4349	1252
25°	3861	3839	3777	3642	3542	1773
35°	3132	3110	2959	2735	2667	1958
45°	2404	2354	2152	1973	1894	1852
55°	1670	1620	1468	1294	1227	1498
65°	992	936	846	863	717	978
75°	398	370	347	331	364	426
85°	56	62	67	73	78	78
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4847.3	4847.3	4847.3	4847.3	4847.3
2.5°	4813.7	4813.7	4813.7	4808.1	4808.1
5°	4763.3	4757.7	4757.7	4752.1	4752.1
7.5°	4724.0	4718.4	4712.8	4707.2	4696.0
10°	4668.0	4668.0	4662.4	4634.4	4628.8
12.5°	4578.3	4572.7	4550.3	4511.1	4499.9
15°	4455.1	4455.1	4410.2	4365.4	4348.6
17.5°	4320.6	4315.0	4258.9	4214.1	4191.7
20°	4174.9	4163.7	4107.6	4034.8	3995.5
22.5°	4012.4	4012.4	3945.1	3849.8	3810.6
25°	3861.0	3838.6	3777.0	3642.5	3541.6
27.5°	3687.3	3653.7	3586.5	3395.9	3278.2
30°	3496.8	3480.0	3384.7	3138.2	3048.5
32.5°	3317.5	3289.5	3188.6	2930.8	2858.0
35°	3132.5	3110.1	2958.8	2734.7	2667.4
37.5°	2947.6	2919.6	2729.1	2549.7	2465.7
40°	2762.7	2729.1	2521.7	2359.2	2269.6
42.5°	2589.0	2544.1	2342.4	2168.7	2067.8
45°	2404.0	2353.6	2151.9	1972.6	1894.1
47.5°	2219.1	2174.3	1989.4	1804.4	1714.8
50°	2023.0	1983.8	1815.6	1630.7	1535.5
52.5°	1860.5	1798.8	1636.3	1451.4	1372.9
55°	1669.9	1619.5	1468.2	1294.5	1227.2
57.5°	1496.2	1445.8	1305.7	1143.2	1087.1
60°	1333.7	1260.9	1143.2	1003.1	958.3
62.5°	1154.4	1098.4	997.5	879.8	935.8
65°	991.9	935.8	846.2	863.0	717.3
67.5°	812.6	784.5	706.1	627.6	605.2
70°	661.3	627.6	599.6	515.6	493.1
72.5°	526.8	493.1	453.9	409.1	392.3
75°	397.9	369.9	347.4	330.6	364.2
77.5°	274.6	263.4	246.6	229.8	224.2
80°	179.3	173.7	168.1	162.5	156.9
82.5°	106.5	106.5	106.5	106.5	106.5
85°	56.0	61.6	67.2	72.8	78.5
87.5°	33.6	33.6	39.2	44.8	50.4
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)