

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: P547392

Luminaire Tested: **FMR-24-4-LD4-4LO-40-UNV-81-85-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: P547392
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-LD4-4LO-40-UNV-81-85-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

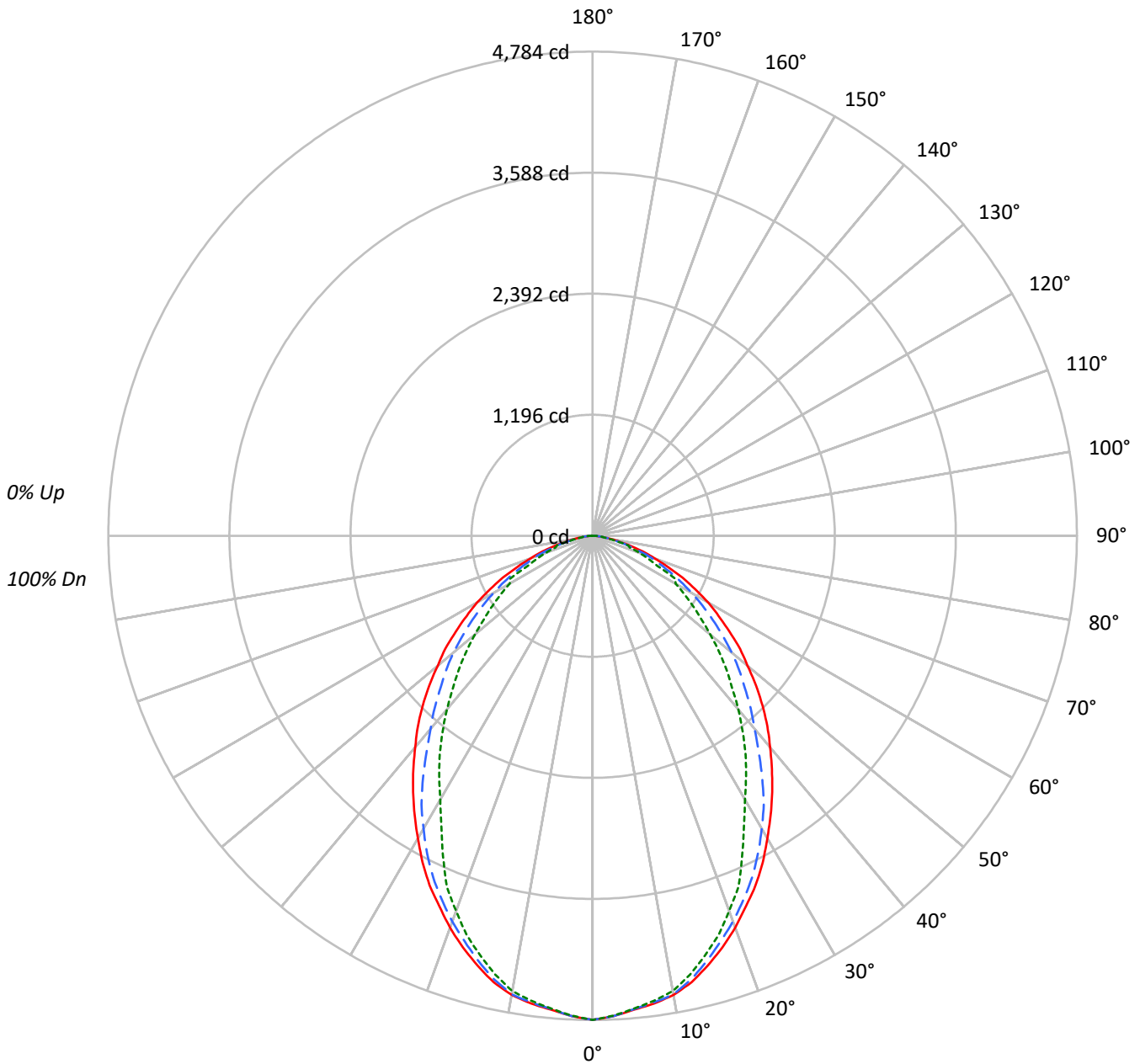
Lumens per Lamp: N/A
Luminaire Lumens: 9391.0 lumens
Efficiency: N/A
Efficacy: 100.3 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 93.6
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°	6436	6436	6436
5°	6349	6341	6334
10°	6294	6286	6241
15°	6124	6063	5978
20°	5899	5804	5646
25°	5657	5534	5189
30°	5361	5190	4674
35°	5078	4796	4324
40°	4789	4371	3934
45°	4514	4041	3557
50°	4179	3751	3172
55°	3866	3399	2841
60°	3542	3036	2545
65°	3117	2659	2254
70°	2567	2328	1915
75°	2041	1783	1869
80°	1371	1285	1199
85°	854	1025	1195



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	445.3	4.7
10°-20°	1222.1	13.0
20°-30°	1691.9	18.0
30°-40°	1804.0	19.2
40°-50°	1645.8	17.5
50°-60°	1289.3	13.7
60°-70°	840.3	8.9
70°-80°	372.3	4.0
80°-90°	79.9	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°	3359.2	35.8
0°-40°	5163.3	55.0
0°-60°	8098.4	86.2
0°-90°	9391.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9391.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4784	4784	4784	4784	4784	
5°	4701	4695	4695	4690	4690	446
15°	4396	4396	4352	4308	4292	1236
25°	3810	3788	3727	3595	3495	1749
35°	3091	3069	2920	2699	2632	1933
45°	2372	2323	2124	1947	1869	1828
55°	1648	1598	1449	1278	1211	1478
65°	979	924	835	852	708	965
75°	393	365	343	326	360	421
85°	55	61	66	72	77	77
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4783.6	4783.6	4783.6	4783.6	4783.6
2.5°	4750.5	4750.5	4750.5	4744.9	4744.9
5°	4700.7	4695.2	4695.2	4689.6	4689.6
7.5°	4662.0	4656.5	4650.9	4645.4	4634.3
10°	4606.7	4606.7	4601.2	4573.5	4568.0
12.5°	4518.2	4512.7	4490.5	4451.8	4440.8
15°	4396.5	4396.5	4352.3	4308.1	4291.5
17.5°	4263.8	4258.3	4203.0	4158.7	4136.6
20°	4120.0	4109.0	4053.7	3981.8	3943.1
22.5°	3959.6	3959.6	3893.3	3799.3	3760.6
25°	3810.3	3788.2	3727.4	3594.7	3495.1
27.5°	3638.9	3605.7	3539.3	3351.3	3235.2
30°	3450.9	3434.3	3340.3	3096.9	3008.4
32.5°	3273.9	3246.2	3146.7	2892.3	2820.4
35°	3091.4	3069.3	2920.0	2698.8	2632.4
37.5°	2908.9	2881.3	2693.2	2516.3	2433.3
40°	2726.4	2693.2	2488.6	2328.2	2239.7
42.5°	2555.0	2510.7	2311.6	2140.2	2040.7
45°	2372.5	2322.7	2123.6	1946.6	1869.2
47.5°	2190.0	2145.7	1963.2	1780.7	1692.3
50°	1996.4	1957.7	1791.8	1609.3	1515.3
52.5°	1836.0	1775.2	1614.8	1432.3	1354.9
55°	1648.0	1598.2	1448.9	1277.5	1211.1
57.5°	1476.6	1426.8	1288.5	1128.2	1072.9
60°	1316.2	1244.3	1128.2	989.9	945.7
62.5°	1139.2	1083.9	984.4	868.2	923.5
65°	978.9	923.5	835.1	851.7	707.9
67.5°	801.9	774.2	696.8	619.4	597.3
70°	652.6	619.4	591.7	508.8	486.7
72.5°	519.8	486.7	447.9	403.7	387.1
75°	392.6	365.0	342.9	326.3	359.5
77.5°	271.0	259.9	243.3	226.7	221.2
80°	177.0	171.4	165.9	160.4	154.8
82.5°	105.1	105.1	105.1	105.1	105.1
85°	55.3	60.8	66.4	71.9	77.4
87.5°	33.2	33.2	38.7	44.2	49.8
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)