

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: P547464

Luminaire Tested: **FMR-24-4-LD4-4STD-35-UNV-82-85-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: P547464
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-LD4-4STD-35-UNV-82-85-EDD
Description: 2X4 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

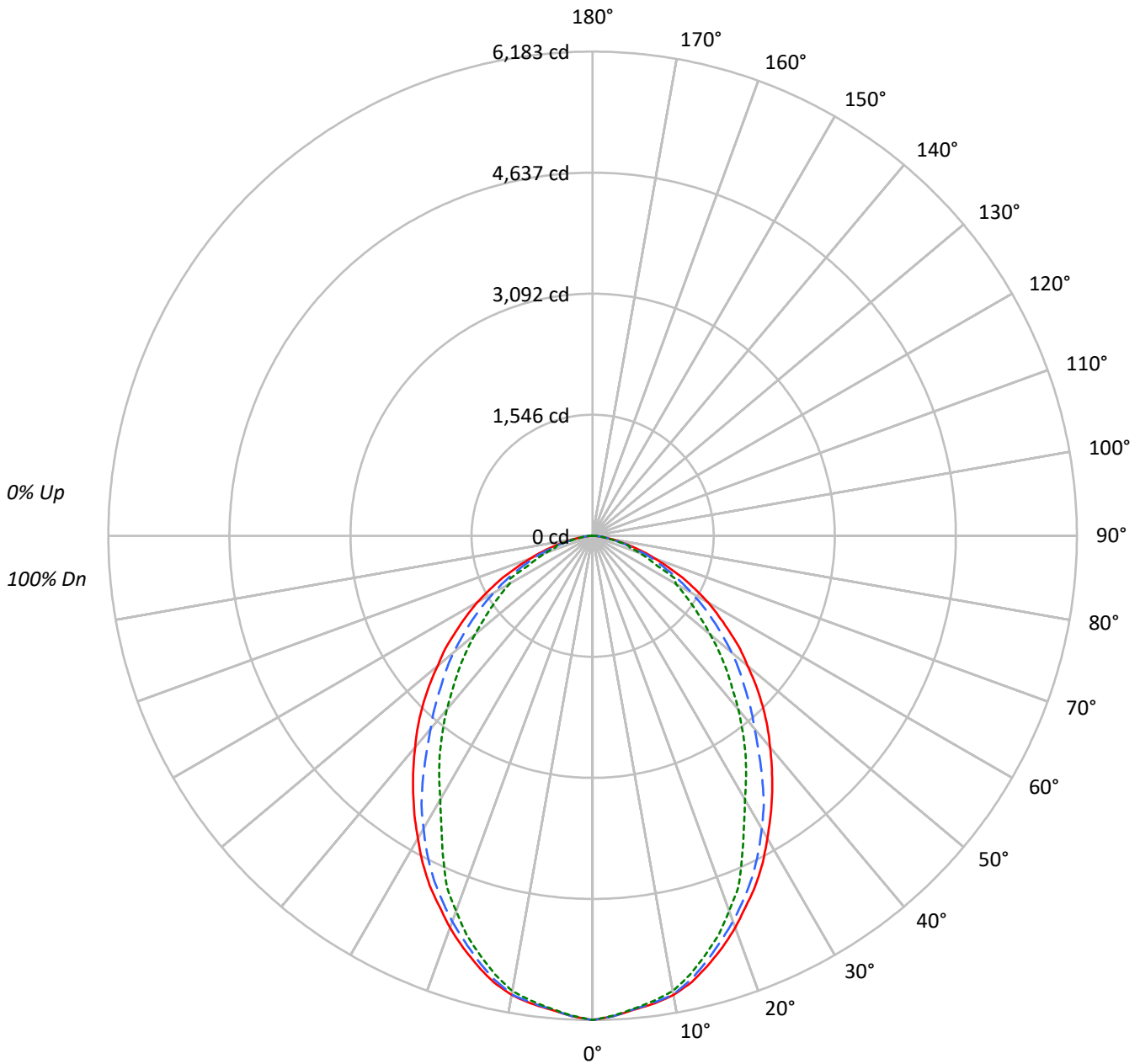
Lumens per Lamp: N/A
Luminaire Lumens: 12138.0 lumens
Efficiency: N/A
Efficacy: 91.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 133.2
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°	8319	8319	8319
5°	8206	8196	8187
10°	8135	8125	8067
15°	7916	7836	7726
20°	7625	7502	7297
25°	7311	7152	6707
30°	6930	6708	6041
35°	6563	6199	5589
40°	6189	5650	5085
45°	5835	5223	4597
50°	5401	4848	4100
55°	4997	4393	3672
60°	4578	3924	3289
65°	4028	3436	2913
70°	3318	3009	2474
75°	2638	2304	2415
80°	1772	1661	1550
85°	1104	1325	1545



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	575.5	4.7
10°-20°	1579.5	13.0
20°-30°	2186.8	18.0
30°-40°	2331.7	19.2
40°-50°	2127.2	17.5
50°-60°	1666.5	13.7
60°-70°	1086.1	8.9
70°-80°	481.2	4.0
80°-90°	103.3	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°	4341.9	35.8
0°-40°	6673.6	55.0
0°-60°	10467.3	86.2
0°-90°	12138.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12138.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6183	6183	6183	6183	6183	
5°	6076	6069	6069	6061	6061	577
15°	5683	5683	5625	5568	5547	1598
25°	4925	4896	4818	4646	4518	2261
35°	3996	3967	3774	3488	3402	2498
45°	3066	3002	2745	2516	2416	2362
55°	2130	2066	1873	1651	1565	1911
65°	1265	1194	1079	1101	915	1247
75°	508	472	443	422	465	544
85°	72	79	86	93	100	99
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6182.9	6182.9	6182.9	6182.9	6182.9
2.5°	6140.0	6140.0	6140.0	6132.9	6132.9
5°	6075.7	6068.6	6068.6	6061.4	6061.4
7.5°	6025.7	6018.5	6011.4	6004.2	5989.9
10°	5954.2	5954.2	5947.1	5911.3	5904.2
12.5°	5839.8	5832.7	5804.1	5754.1	5739.8
15°	5682.6	5682.6	5625.4	5568.2	5546.8
17.5°	5511.0	5503.9	5432.4	5375.2	5346.6
20°	5325.2	5310.9	5239.4	5146.5	5096.5
22.5°	5117.9	5117.9	5032.1	4910.6	4860.6
25°	4924.9	4896.3	4817.7	4646.1	4517.5
27.5°	4703.3	4660.4	4574.7	4331.6	4181.5
30°	4460.3	4438.8	4317.3	4002.8	3888.5
32.5°	4231.6	4195.8	4067.2	3738.4	3645.4
35°	3995.7	3967.1	3774.1	3488.2	3402.4
37.5°	3759.8	3724.1	3481.0	3252.3	3145.1
40°	3523.9	3481.0	3216.6	3009.3	2894.9
42.5°	3302.3	3245.1	2987.8	2766.2	2637.6
45°	3066.4	3002.1	2744.8	2516.1	2416.0
47.5°	2830.6	2773.4	2537.5	2301.6	2187.3
50°	2580.4	2530.4	2315.9	2080.0	1958.5
52.5°	2373.1	2294.5	2087.2	1851.3	1751.2
55°	2130.1	2065.7	1872.8	1651.2	1565.4
57.5°	1908.5	1844.2	1665.5	1458.2	1386.7
60°	1701.2	1608.3	1458.2	1279.5	1222.3
62.5°	1472.5	1401.0	1272.3	1122.2	1193.7
65°	1265.2	1193.7	1079.3	1100.8	914.9
67.5°	1036.4	1000.7	900.6	800.6	772.0
70°	843.5	800.6	764.8	657.6	629.0
72.5°	671.9	629.0	579.0	521.8	500.4
75°	507.5	471.8	443.2	421.7	464.6
77.5°	350.2	336.0	314.5	293.1	285.9
80°	228.7	221.6	214.4	207.3	200.1
82.5°	135.8	135.8	135.8	135.8	135.8
85°	71.5	78.6	85.8	92.9	100.1
87.5°	42.9	42.9	50.0	57.2	64.3
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)