

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: P547467

Luminaire Tested: **FMR-24-4-LD4-4STD-35-UNV-82-88-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: P547467
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-82-88-EDD
Description: 2X4 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

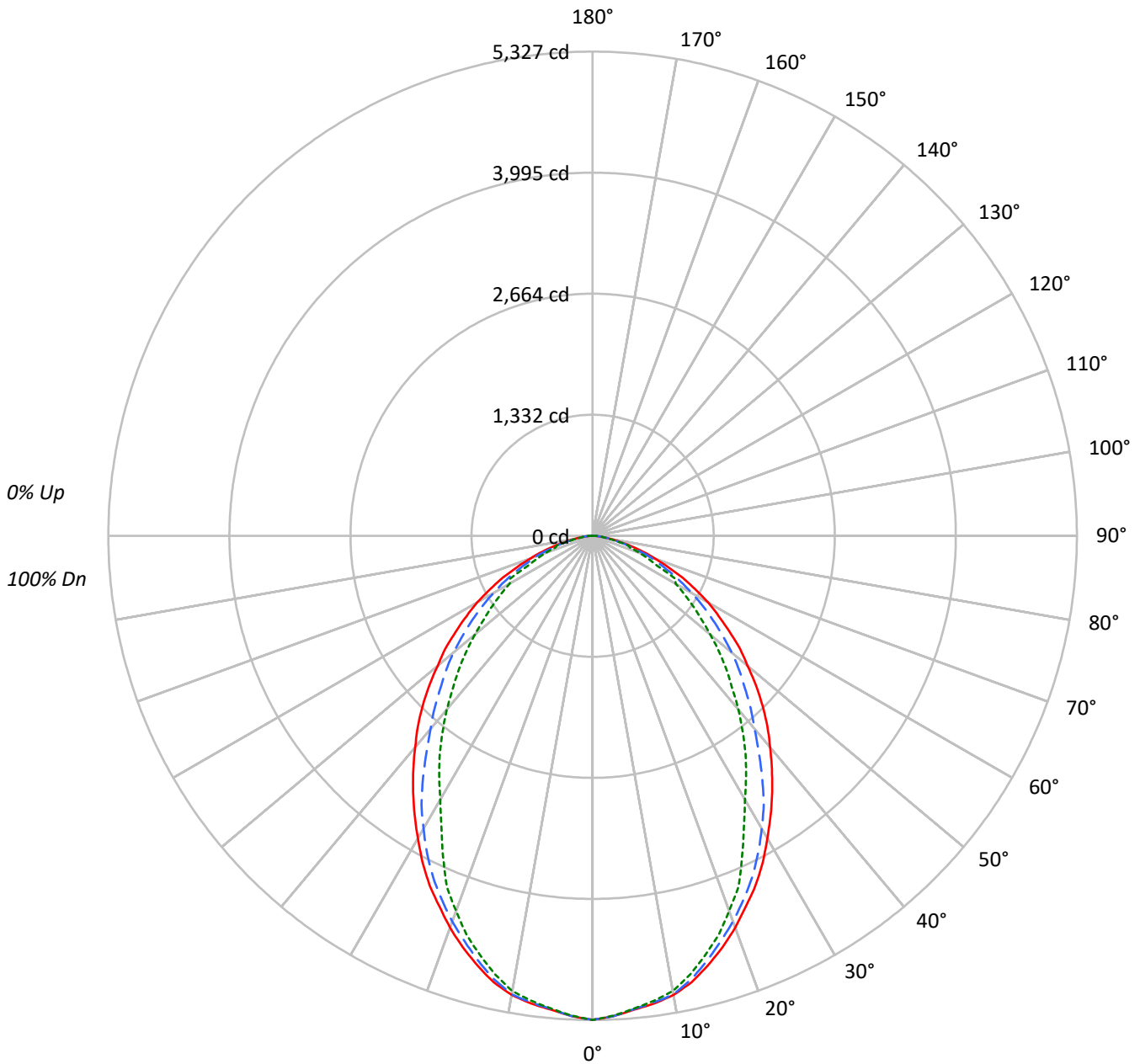
Lumens per Lamp: N/A
Luminaire Lumens: 10457.0 lumens
Efficiency: N/A
Efficacy: 78.5 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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				20				20	
RC	80				70				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				100
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87				87
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75				75
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65				65
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56				56
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50				50
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44				44
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40				40
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36				36
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33				33
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30				30

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7167	7167	7167
5°	7070	7061	7053
10°	7008	7000	6949
15°	6819	6751	6656
20°	6569	6463	6287
25°	6299	6162	5778
30°	5970	5779	5205
35°	5654	5341	4815
40°	5332	4867	4380
45°	5027	4500	3961
50°	4653	4176	3532
55°	4305	3785	3164
60°	3944	3380	2834
65°	3470	2961	2509
70°	2858	2592	2132
75°	2273	1985	2081
80°	1527	1431	1336
85°	951	1141	1331



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	495.8	4.7
10°-20°	1360.8	13.0
20°-30°	1883.9	18.0
30°-40°	2008.8	19.2
40°-50°	1832.6	17.5
50°-60°	1435.7	13.7
60°-70°	935.7	8.9
70°-80°	414.6	4.0
80°-90°	89.0	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°	3740.6	35.8
0°-40°	5749.4	55.0
0°-60°	9017.7	86.2
0°-90°	10457.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10457.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5327	5327	5327	5327	5327	
5°	5234	5228	5228	5222	5222	497
15°	4896	4896	4846	4797	4779	1376
25°	4243	4218	4150	4003	3892	1948
35°	3442	3418	3251	3005	2931	2152
45°	2642	2586	2365	2168	2081	2035
55°	1835	1780	1613	1422	1349	1646
65°	1090	1028	930	948	788	1074
75°	437	406	382	363	400	469
85°	62	68	74	80	86	85
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5326.7	5326.7	5326.7	5326.7	5326.7
2.5°	5289.7	5289.7	5289.7	5283.6	5283.6
5°	5234.3	5228.1	5228.1	5222.0	5222.0
7.5°	5191.2	5185.0	5178.9	5172.7	5160.4
10°	5129.6	5129.6	5123.4	5092.7	5086.5
12.5°	5031.1	5024.9	5000.3	4957.2	4944.9
15°	4895.6	4895.6	4846.3	4797.1	4778.6
17.5°	4747.8	4741.6	4680.1	4630.8	4606.2
20°	4587.7	4575.4	4513.8	4433.7	4390.6
22.5°	4409.1	4409.1	4335.2	4230.5	4187.4
25°	4242.9	4218.2	4150.5	4002.7	3891.8
27.5°	4052.0	4015.0	3941.1	3731.7	3602.4
30°	3842.6	3824.1	3719.4	3448.5	3349.9
32.5°	3645.5	3614.7	3503.9	3220.6	3140.6
35°	3442.3	3417.7	3251.4	3005.1	2931.2
37.5°	3239.1	3208.3	2998.9	2801.9	2709.5
40°	3035.9	2998.9	2771.1	2592.5	2494.0
42.5°	2845.0	2795.7	2574.0	2383.1	2272.3
45°	2641.8	2586.4	2364.7	2167.6	2081.4
47.5°	2438.6	2389.3	2186.1	1982.9	1884.3
50°	2223.0	2179.9	1995.2	1792.0	1687.3
52.5°	2044.5	1976.7	1798.1	1594.9	1508.7
55°	1835.1	1779.7	1613.4	1422.5	1348.6
57.5°	1644.2	1588.8	1434.8	1256.2	1194.6
60°	1465.6	1385.5	1256.2	1102.3	1053.0
62.5°	1268.5	1207.0	1096.1	966.8	1028.4
65°	1090.0	1028.4	929.9	948.3	788.2
67.5°	892.9	862.1	775.9	689.7	665.1
70°	726.6	689.7	658.9	566.5	541.9
72.5°	578.9	541.9	498.8	449.5	431.1
75°	437.2	406.4	381.8	363.3	400.3
77.5°	301.7	289.4	271.0	252.5	246.3
80°	197.1	190.9	184.7	178.6	172.4
82.5°	117.0	117.0	117.0	117.0	117.0
85°	61.6	67.7	73.9	80.1	86.2
87.5°	36.9	36.9	43.1	49.3	55.4
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)