

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: P547197

Luminaire Tested: **FMR-24-4-LD4-3STD-40-UNV-80-96-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: P547197
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-80-96-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

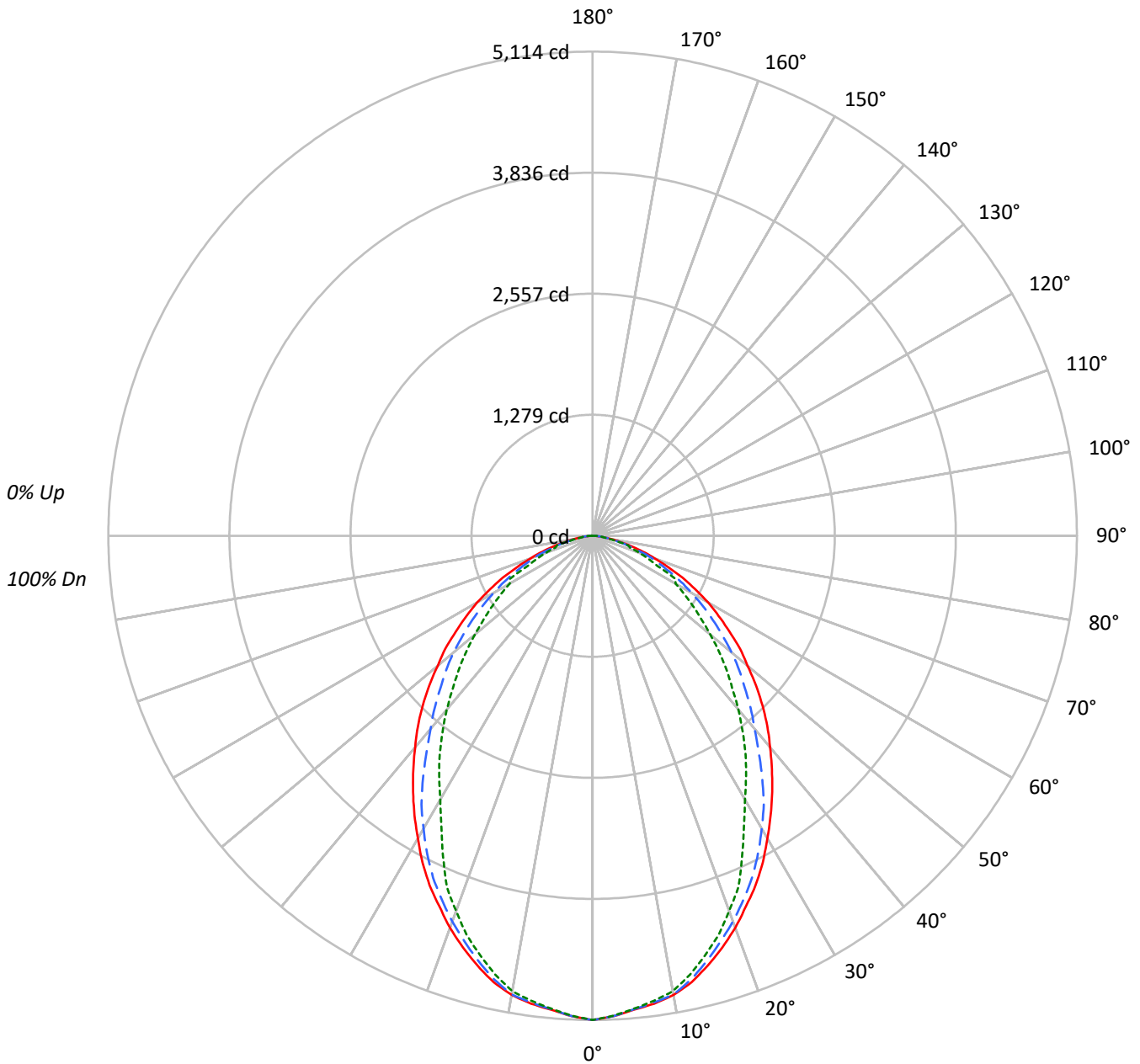
Lumens per Lamp: N/A
Luminaire Lumens: 10040.0 lumens
Efficiency: N/A
Efficacy: 100.5 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P547197

CATALOG NUMBER: FMR-24-4-LD4-3STD-40-UNV-80-96-EDD

Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6881	6881	6881
5°	6788	6780	6772
10°	6729	6721	6672
15°	6547	6482	6391
20°	6307	6205	6036
25°	6048	5916	5547
30°	5732	5548	4997
35°	5429	5128	4623
40°	5120	4673	4206
45°	4826	4320	3803
50°	4468	4010	3391
55°	4133	3634	3037
60°	3787	3246	2721
65°	3332	2842	2409
70°	2745	2489	2047
75°	2182	1906	1998
80°	1466	1375	1282
85°	912	1095	1278



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	476.1	4.7
10°-20°	1306.5	13.0
20°-30°	1808.8	18.0
30°-40°	1928.7	19.2
40°-50°	1759.5	17.5
50°-60°	1378.5	13.7
60°-70°	898.4	8.9
70°-80°	398.0	4.0
80°-90°	85.5	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°	3591.4	35.8
0°-40°	5520.1	55.0
0°-60°	8658.1	86.2
0°-90°	10040.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10040.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5114	5114	5114	5114	5114	
5°	5026	5020	5020	5014	5014	477
15°	4700	4700	4653	4606	4588	1321
25°	4074	4050	3985	3843	3737	1870
35°	3305	3281	3122	2885	2814	2066
45°	2536	2483	2270	2081	1998	1954
55°	1762	1709	1549	1366	1295	1580
65°	1046	987	893	910	757	1031
75°	420	390	367	349	384	450
85°	59	65	71	77	83	82
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5114.2	5114.2	5114.2	5114.2	5114.2
2.5°	5078.8	5078.8	5078.8	5072.9	5072.9
5°	5025.6	5019.6	5019.6	5013.7	5013.7
7.5°	4984.2	4978.3	4972.3	4966.4	4954.6
10°	4925.0	4925.0	4919.1	4889.6	4883.7
12.5°	4830.4	4824.5	4800.9	4759.5	4747.7
15°	4700.4	4700.4	4653.1	4605.8	4588.0
17.5°	4558.5	4552.6	4493.4	4446.1	4422.5
20°	4404.8	4392.9	4333.8	4256.9	4215.6
22.5°	4233.3	4233.3	4162.3	4061.8	4020.4
25°	4073.7	4050.0	3985.0	3843.1	3736.6
27.5°	3890.4	3854.9	3783.9	3582.9	3458.8
30°	3689.3	3671.6	3571.1	3311.0	3216.4
32.5°	3500.2	3470.6	3364.2	3092.2	3015.3
35°	3305.0	3281.4	3121.8	2885.3	2814.3
37.5°	3109.9	3080.4	2879.3	2690.2	2601.5
40°	2914.8	2879.3	2660.6	2489.1	2394.5
42.5°	2731.5	2684.2	2471.4	2288.1	2181.7
45°	2536.4	2483.2	2270.4	2081.2	1998.4
47.5°	2341.3	2294.0	2098.9	1903.8	1809.2
50°	2134.4	2093.0	1915.6	1720.5	1620.0
52.5°	1962.9	1897.9	1726.4	1531.3	1448.5
55°	1761.9	1708.7	1549.1	1365.8	1294.8
57.5°	1578.6	1525.4	1377.6	1206.1	1147.0
60°	1407.2	1330.3	1206.1	1058.3	1011.0
62.5°	1218.0	1158.8	1052.4	928.2	987.4
65°	1046.5	987.4	892.8	910.5	756.8
67.5°	857.3	827.7	745.0	662.2	638.5
70°	697.7	662.2	632.6	543.9	520.3
72.5°	555.8	520.3	478.9	431.6	413.9
75°	419.8	390.2	366.6	348.8	384.3
77.5°	289.7	277.9	260.1	242.4	236.5
80°	189.2	183.3	177.4	171.5	165.5
82.5°	112.3	112.3	112.3	112.3	112.3
85°	59.1	65.0	70.9	76.9	82.8
87.5°	35.5	35.5	41.4	47.3	53.2
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)