

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: P547295

Luminaire Tested: **FMR-24-4-LD4-4HI-40-UNV-81-84-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: P547295
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-LD4-4HI-40-UNV-81-84-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

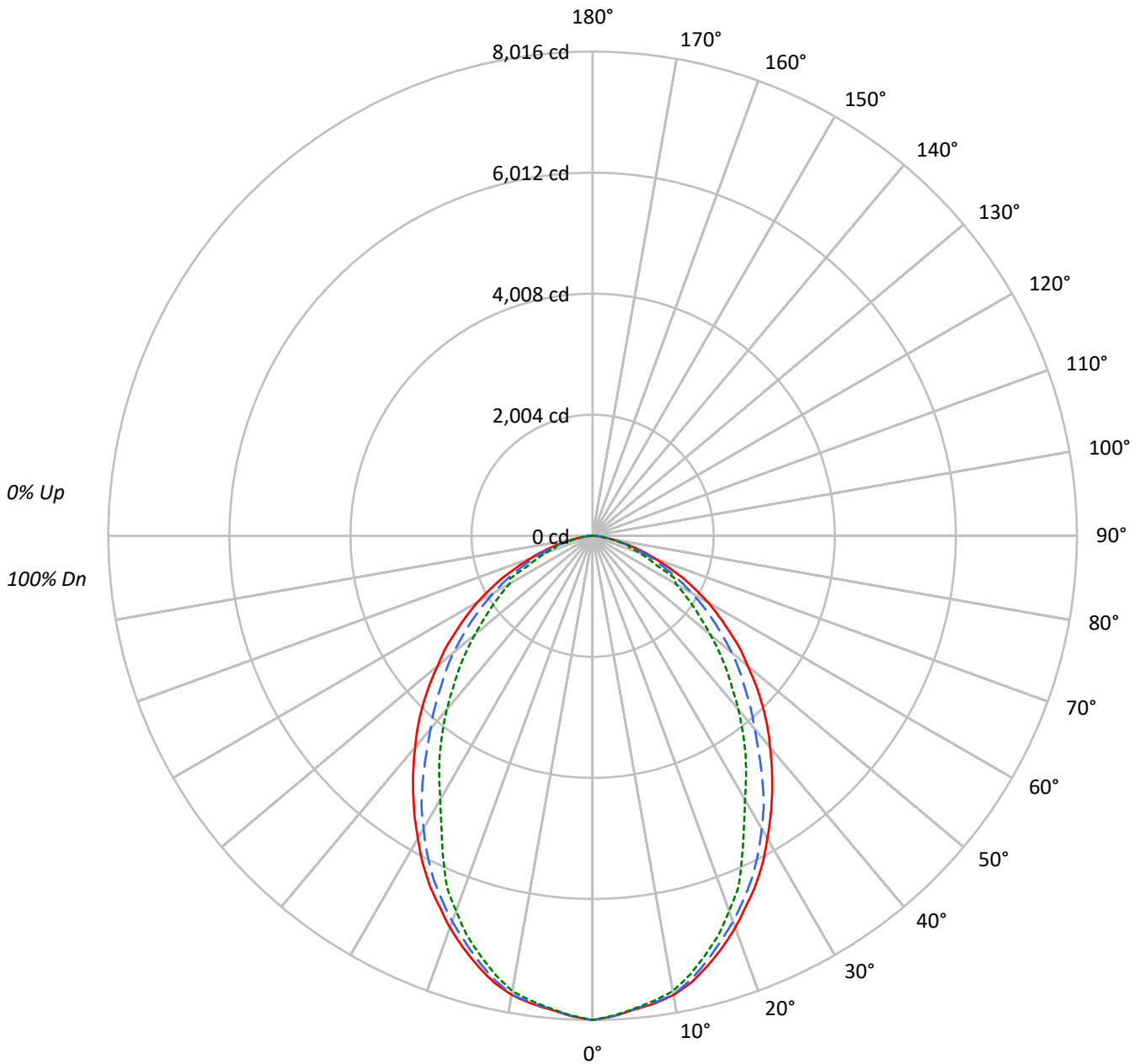
Lumens per Lamp: N/A
Luminaire Lumens: 15737.0 lumens
Efficiency: N/A
Efficacy: 91.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 172.8
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: P547295

CATALOG NUMBER: FMR-24-4-LD4-4HI-40-UNV-81-84-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P547295

CATALOG NUMBER: FMR-24-4-LD4-4HI-40-UNV-81-84-EDD

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°	10786	10786	10786
5°	10639	10627	10614
10°	10547	10534	10458
15°	10263	10159	10017
20°	9886	9726	9461
25°	9479	9273	8695
30°	8984	8696	7833
35°	8509	8037	7246
40°	8025	7325	6592
45°	7565	6771	5960
50°	7003	6285	5315
55°	6478	5696	4761
60°	5935	5087	4264
65°	5222	4455	3777
70°	4302	3901	3208
75°	3421	2987	3132
80°	2298	2154	2011
85°	1431	1717	2002



TEST NUMBER: P547295

CATALOG NUMBER: FMR-24-4-LD4-4HI-40-UNV-81-84-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	746.2	4.7
10°-20°	2047.9	13.0
20°-30°	2835.2	18.0
30°-40°	3023.1	19.2
40°-50°	2758.0	17.5
50°-60°	2160.6	13.7
60°-70°	1408.2	8.9
70°-80°	623.9	4.0
80°-90°	134.0	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°	5629.3	35.8
0°-40°	8652.4	55.0
0°-60°	13571.0	86.2
0°-90°	15737.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	15737.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	8016	8016	8016	8016	8016	
5°	7877	7868	7868	7859	7859	748
15°	7368	7368	7293	7219	7191	2071
25°	6385	6348	6246	6024	5857	2931
35°	5180	5143	4893	4522	4411	3239
45°	3976	3892	3559	3262	3132	3062
55°	2762	2678	2428	2141	2030	2477
65°	1640	1548	1399	1427	1186	1617
75°	658	612	575	547	602	705
85°	93	102	111	120	130	129
90°	0	0	0	0	0	



TEST NUMBER: P547295

CATALOG NUMBER: FMR-24-4-LD4-4HI-40-UNV-81-84-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	8016.2	8016.2	8016.2	8016.2	8016.2
2.5°	7960.6	7960.6	7960.6	7951.3	7951.3
5°	7877.2	7867.9	7867.9	7858.7	7858.7
7.5°	7812.3	7803.1	7793.8	7784.5	7766.0
10°	7719.7	7719.7	7710.4	7664.1	7654.8
12.5°	7571.4	7562.1	7525.1	7460.2	7441.6
15°	7367.5	7367.5	7293.4	7219.2	7191.4
17.5°	7145.1	7135.8	7043.2	6969.0	6931.9
20°	6904.1	6885.6	6792.9	6672.5	6607.6
22.5°	6635.4	6635.4	6524.2	6366.6	6301.8
25°	6385.2	6348.1	6246.2	6023.7	5856.9
27.5°	6097.9	6042.3	5931.1	5616.0	5421.4
30°	5782.8	5755.0	5597.5	5189.7	5041.4
32.5°	5486.2	5439.9	5273.1	4846.8	4726.3
35°	5180.4	5143.4	4893.1	4522.4	4411.2
37.5°	4874.6	4828.3	4513.2	4216.6	4077.6
40°	4568.8	4513.2	4170.3	3901.5	3753.3
42.5°	4281.5	4207.4	3873.7	3586.4	3419.6
45°	3975.7	3892.3	3558.6	3262.1	3132.3
47.5°	3669.9	3595.7	3289.9	2984.1	2835.8
50°	3345.5	3280.6	3002.6	2696.8	2539.2
52.5°	3076.7	2974.8	2706.1	2400.2	2270.5
55°	2761.7	2678.3	2428.0	2140.7	2029.5
57.5°	2474.4	2391.0	2159.3	1890.5	1797.9
60°	2205.6	2085.1	1890.5	1658.8	1584.7
62.5°	1909.1	1816.4	1649.6	1455.0	1547.6
65°	1640.3	1547.6	1399.4	1427.2	1186.2
67.5°	1343.8	1297.4	1167.7	1037.9	1000.9
70°	1093.5	1037.9	991.6	852.6	815.5
72.5°	871.1	815.5	750.7	676.5	648.7
75°	658.0	611.6	574.6	546.8	602.4
77.5°	454.1	435.6	407.8	380.0	370.7
80°	296.6	287.3	278.0	268.8	259.5
82.5°	176.1	176.1	176.1	176.1	176.1
85°	92.7	101.9	111.2	120.5	129.7
87.5°	55.6	55.6	64.9	74.1	83.4
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)