

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: P589160

Luminaire Tested: **FMR-24-2-LD4-2LO-50-UNV-82-87-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589160
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-1)
Test Lab: INNOVATION CENTER
Issue Date: 12/8/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FMR-24-2-LD4-2LO-50-UNV-82-87-EDD
Description: 2X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

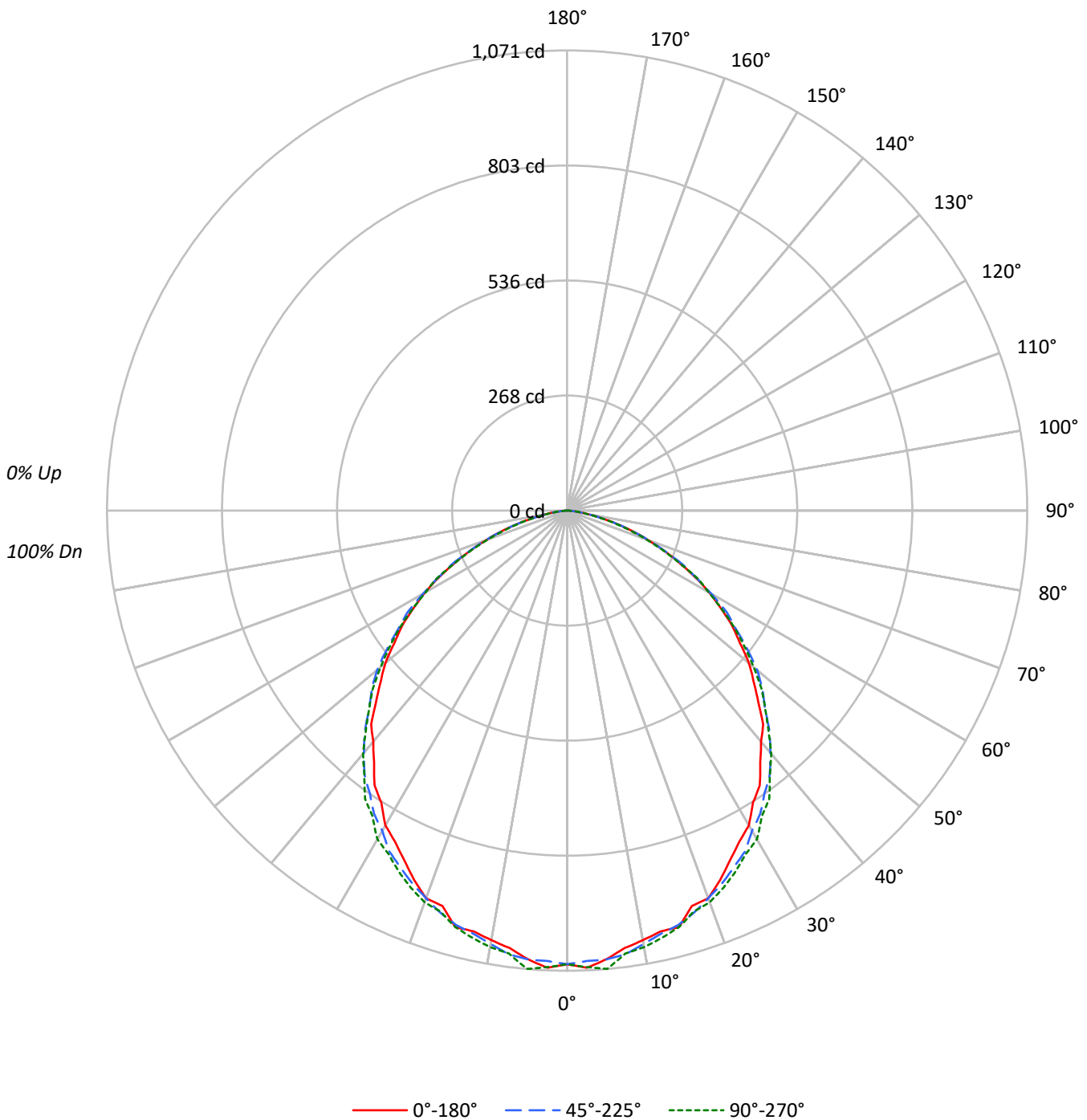
Lumens per Lamp: N/A
Luminaire Lumens: 2661.0 lumens
Efficiency: N/A
Efficacy: 113.7 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 23.4
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: P589160

CATALOG NUMBER: FMR-24-2-LD4-2LO-50-UNV-82-87-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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	110	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2841	2841	2841
5°	2832	2833	2893
10°	2774	2799	2818
15°	2796	2781	2797
20°	2749	2749	2778
25°	2665	2723	2753
30°	2628	2674	2745
35°	2566	2633	2692
40°	2466	2585	2596
45°	2391	2477	2481
50°	2313	2418	2371
55°	2204	2247	2231
60°	2061	2081	2044
65°	1838	1885	1824
70°	1577	1582	1538
75°	1249	1246	1198
80°	837	814	781
85°	454	451	420



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	99.3	3.7
10°-20°	281.5	10.6
20°-30°	421.7	15.8
30°-40°	499.8	18.8
40°-50°	500.7	18.8
50°-60°	425.0	16.0
60°-70°	286.6	10.8
70°-80°	125.9	4.7
80°-90°	20.5	0.8
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°	802.5	30.2
0°-40°	1302.3	48.9
0°-60°	2228.1	83.7
0°-90°	2661.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2661.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1056	1056	1056	1056	1056	
5°	1048	1046	1049	1046	1071	99
15°	1004	992	998	1004	1004	280
25°	897	902	917	929	927	415
35°	781	783	802	820	820	485
45°	628	640	651	668	652	486
55°	470	467	479	476	476	418
65°	289	285	296	285	286	287
75°	120	118	120	111	115	129
85°	15	14	15	14	14	21
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1055.8	1055.8	1055.8	1055.8	1055.8
2.5°	1065.0	1056.9	1049.4	1058.1	1063.5
5°	1048.3	1045.9	1048.7	1045.6	1070.8
7.5°	1026.8	1036.2	1041.6	1038.2	1039.7
10°	1015.3	1012.1	1024.2	1032.6	1031.4
12.5°	1003.1	1008.0	1008.7	1017.8	1018.6
15°	1003.7	992.2	998.3	1003.5	1003.9
17.5°	964.8	977.3	981.5	993.4	978.7
20°	960.0	950.8	960.0	972.1	970.2
22.5°	930.7	920.4	940.1	950.8	950.2
25°	897.4	902.3	917.0	929.0	927.1
27.5°	868.2	874.0	895.0	911.5	900.8
30°	845.7	842.9	860.6	875.3	883.5
32.5°	805.5	815.9	836.6	851.2	843.4
35°	781.1	783.4	801.6	820.1	819.6
37.5°	738.5	749.2	774.7	779.9	775.1
40°	702.1	712.8	735.9	741.5	739.1
42.5°	675.2	677.1	696.9	703.3	693.1
45°	628.4	640.2	650.8	667.6	651.8
47.5°	588.6	594.1	617.0	621.5	613.2
50°	552.5	554.4	577.5	571.9	566.4
52.5°	507.1	515.2	528.1	527.0	520.6
55°	469.8	466.6	478.9	475.6	475.5
57.5°	424.9	430.4	440.5	435.3	427.0
60°	382.9	383.1	386.7	380.9	379.8
62.5°	336.2	337.8	338.6	331.4	343.1
65°	288.6	284.8	296.0	284.6	286.5
67.5°	244.8	246.7	245.7	238.6	241.3
70°	200.4	202.8	201.1	193.0	195.5
72.5°	159.8	156.8	158.7	148.6	153.2
75°	120.1	117.6	119.8	111.4	115.2
77.5°	81.8	83.7	82.3	77.8	80.4
80°	54.0	52.5	52.5	49.9	50.4
82.5°	31.5	30.0	29.6	28.8	30.0
85°	14.7	14.3	14.6	14.2	13.6
87.5°	5.3	5.5	5.5	5.2	4.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)