

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: P589113

Luminaire Tested: **FMR-24-2-LD4-2LO-40-UNV-80-88-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589113
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-40-UNV-80-88-EDD
Description: 2X2 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

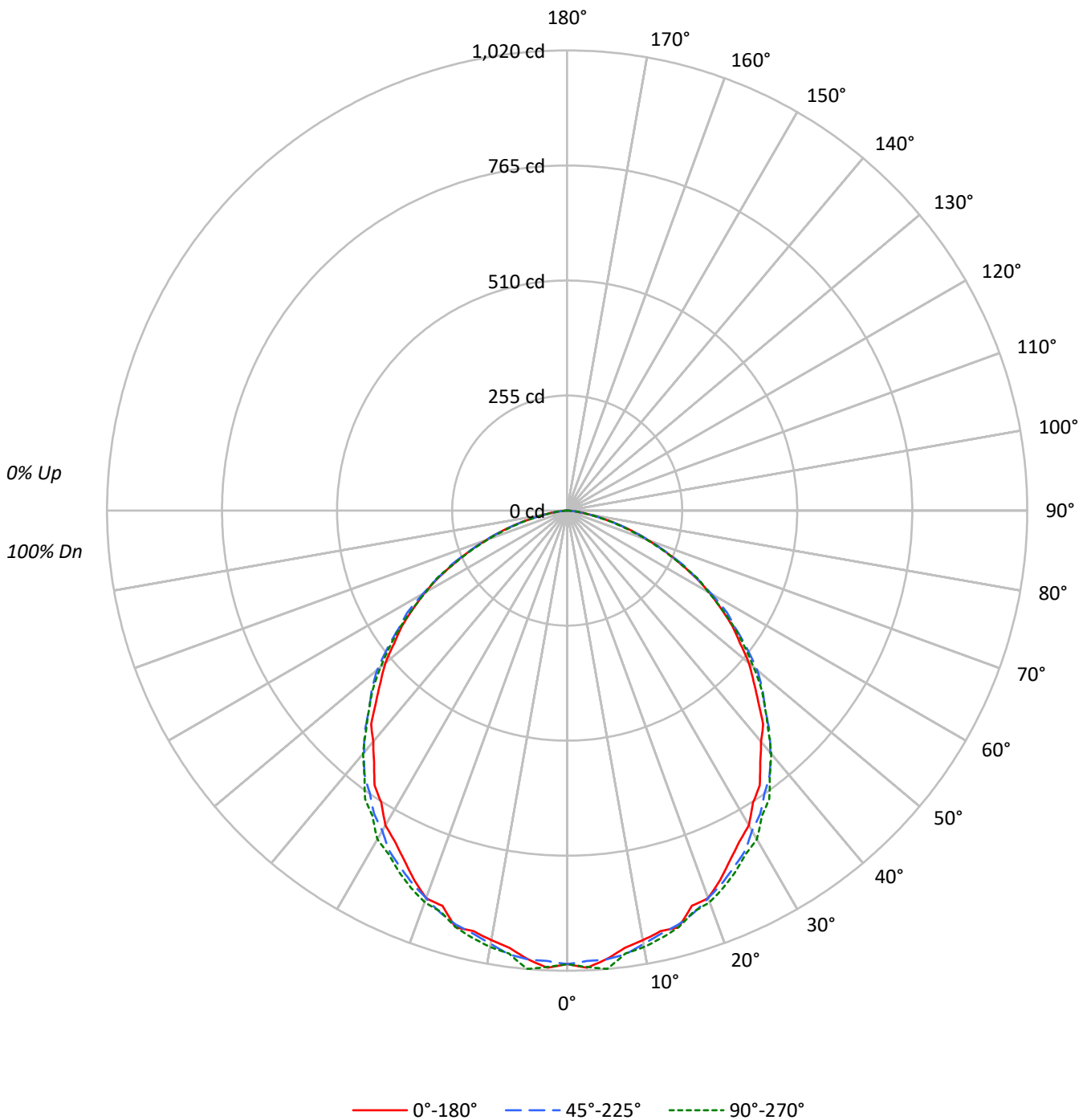
Lumens per Lamp: N/A
Luminaire Lumens: 2534.0 lumens
Efficiency: N/A
Efficacy: 108.3 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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

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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°	2706	2706	2706
5°	2697	2698	2754
10°	2642	2665	2684
15°	2663	2648	2663
20°	2618	2618	2646
25°	2537	2593	2621
30°	2503	2546	2614
35°	2443	2508	2564
40°	2349	2461	2473
45°	2278	2358	2362
50°	2202	2302	2258
55°	2099	2139	2124
60°	1963	1982	1947
65°	1750	1794	1738
70°	1501	1507	1465
75°	1189	1186	1141
80°	797	775	744
85°	432	429	401



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	94.6	3.7
10°-20°	268.0	10.6
20°-30°	401.6	15.8
30°-40°	476.0	18.8
40°-50°	476.8	18.8
50°-60°	404.7	16.0
60°-70°	272.9	10.8
70°-80°	119.9	4.7
80°-90°	19.5	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°	764.2	30.2
0°-40°	1240.2	48.9
0°-60°	2121.7	83.7
0°-90°	2534.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2534.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1005	1005	1005	1005	1005	
5°	998	996	999	996	1020	94
15°	956	945	951	956	956	266
25°	855	859	873	885	883	395
35°	744	746	763	781	780	462
45°	598	610	620	636	621	463
55°	447	444	456	453	453	398
65°	275	271	282	271	273	273
75°	114	112	114	106	110	123
85°	14	14	14	14	13	20
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1005.4	1005.4	1005.4	1005.4	1005.4
2.5°	1014.1	1006.5	999.3	1007.6	1012.7
5°	998.3	996.0	998.7	995.7	1019.7
7.5°	977.8	986.7	991.9	988.7	990.1
10°	966.9	963.8	975.3	983.4	982.2
12.5°	955.2	959.9	960.5	969.2	970.0
15°	955.8	944.8	950.6	955.6	956.0
17.5°	918.7	930.7	934.7	946.0	932.0
20°	914.2	905.5	914.2	925.7	923.9
22.5°	886.3	876.5	895.2	905.5	904.8
25°	854.6	859.3	873.3	884.7	882.9
27.5°	826.8	832.3	852.2	868.0	857.8
30°	805.4	802.7	819.5	833.6	841.3
32.5°	767.1	777.0	796.7	810.6	803.2
35°	743.8	746.1	763.3	781.0	780.5
37.5°	703.2	713.5	737.7	742.7	738.1
40°	668.6	678.8	700.7	706.1	703.9
42.5°	643.0	644.8	663.6	669.7	660.0
45°	598.5	609.6	619.7	635.7	620.7
47.5°	560.5	565.7	587.5	591.8	583.9
50°	526.1	528.0	549.9	544.6	539.4
52.5°	482.9	490.6	502.9	501.9	495.8
55°	447.3	444.4	456.0	452.9	452.8
57.5°	404.6	409.8	419.4	414.5	406.6
60°	364.7	364.8	368.3	362.7	361.7
62.5°	320.1	321.7	322.5	315.6	326.7
65°	274.8	271.2	281.8	271.1	272.9
67.5°	233.2	235.0	233.9	227.2	229.8
70°	190.8	193.2	191.5	183.8	186.2
72.5°	152.1	149.3	151.1	141.5	145.9
75°	114.4	112.0	114.1	106.1	109.7
77.5°	77.9	79.7	78.4	74.1	76.6
80°	51.4	50.0	50.0	47.5	48.0
82.5°	30.0	28.6	28.2	27.4	28.6
85°	14.0	13.6	13.9	13.5	13.0
87.5°	5.1	5.2	5.2	4.9	4.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)