

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: P589112

Luminaire Tested: **FMR-24-2-LD4-2LO-40-UNV-80-87-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589112
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-80-87-EDD
Description: 2X2 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

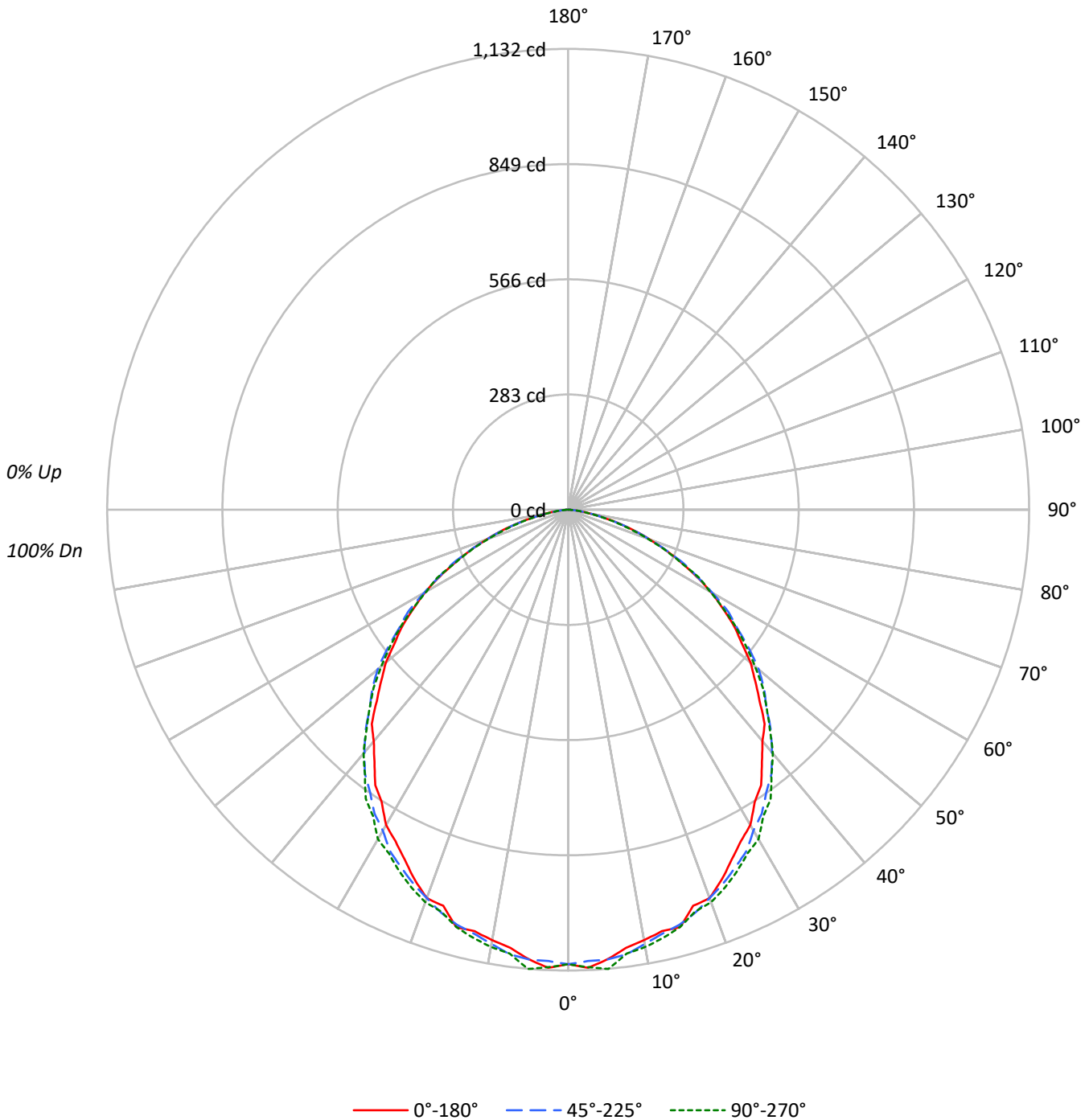
Lumens per Lamp: N/A
Luminaire Lumens: 2814.0 lumens
Efficiency: N/A
Efficacy: 120.3 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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°	3004	3004	3004
5°	2995	2996	3059
10°	2934	2960	2980
15°	2957	2941	2958
20°	2907	2907	2938
25°	2818	2879	2911
30°	2779	2828	2903
35°	2713	2785	2847
40°	2608	2734	2746
45°	2529	2619	2623
50°	2446	2557	2508
55°	2331	2376	2359
60°	2179	2201	2161
65°	1943	1993	1929
70°	1667	1673	1626
75°	1320	1317	1266
80°	885	860	826
85°	482	475	445



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	105.0	3.7
10°-20°	297.7	10.6
20°-30°	446.0	15.8
30°-40°	528.5	18.8
40°-50°	529.5	18.8
50°-60°	449.5	16.0
60°-70°	303.0	10.8
70°-80°	133.2	4.7
80°-90°	21.6	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°	848.6	30.2
0°-40°	1377.2	48.9
0°-60°	2356.2	83.7
0°-90°	2814.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2814.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1116	1116	1116	1116	1116	
5°	1109	1106	1109	1106	1132	105
15°	1062	1049	1056	1061	1062	296
25°	949	954	970	982	980	439
35°	826	828	848	867	867	513
45°	665	677	688	706	689	514
55°	497	494	506	503	503	442
65°	305	301	313	301	303	304
75°	127	124	127	118	122	136
85°	16	15	15	15	14	23
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1116.5	1116.5	1116.5	1116.5	1116.5
2.5°	1126.2	1117.7	1109.7	1119.0	1124.6
5°	1108.6	1106.0	1109.0	1105.7	1132.4
7.5°	1085.8	1095.8	1101.5	1097.9	1099.5
10°	1073.7	1070.2	1083.1	1092.0	1090.7
12.5°	1060.7	1065.9	1066.6	1076.3	1077.2
15°	1061.5	1049.2	1055.7	1061.2	1061.6
17.5°	1020.2	1033.5	1038.0	1050.5	1034.9
20°	1015.2	1005.5	1015.2	1028.0	1026.0
22.5°	984.2	973.4	994.1	1005.5	1004.8
25°	949.0	954.2	969.8	982.5	980.4
27.5°	918.2	924.2	946.4	963.9	952.6
30°	894.4	891.3	910.1	925.7	934.3
32.5°	851.8	862.8	884.7	900.1	891.9
35°	826.0	828.5	847.7	867.3	866.7
37.5°	780.9	792.3	819.3	824.7	819.7
40°	742.4	753.8	778.2	784.1	781.6
42.5°	714.0	716.0	736.9	743.7	732.9
45°	664.6	677.0	688.2	706.0	689.2
47.5°	622.5	628.3	652.5	657.2	648.4
50°	584.3	586.3	610.7	604.8	599.0
52.5°	536.3	544.8	558.5	557.3	550.5
55°	496.8	493.5	506.4	503.0	502.8
57.5°	449.3	455.1	465.8	460.3	451.5
60°	404.9	405.1	409.0	402.8	401.6
62.5°	355.5	357.2	358.1	350.5	362.9
65°	305.2	301.2	313.0	301.0	303.0
67.5°	258.9	260.9	259.8	252.3	255.2
70°	211.9	214.5	212.6	204.1	206.7
72.5°	169.0	165.8	167.8	157.1	162.0
75°	127.0	124.4	126.7	117.8	121.8
77.5°	86.5	88.5	87.1	82.3	85.1
80°	57.1	55.5	55.5	52.8	53.3
82.5°	33.3	31.7	31.3	30.4	31.7
85°	15.6	15.1	15.4	15.0	14.4
87.5°	5.6	5.8	5.8	5.5	5.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)