

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: P589593

Luminaire Tested: **FMR-24-2-LD4-4HI-40-UNV-80-88-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589593
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-LD4-4HI-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

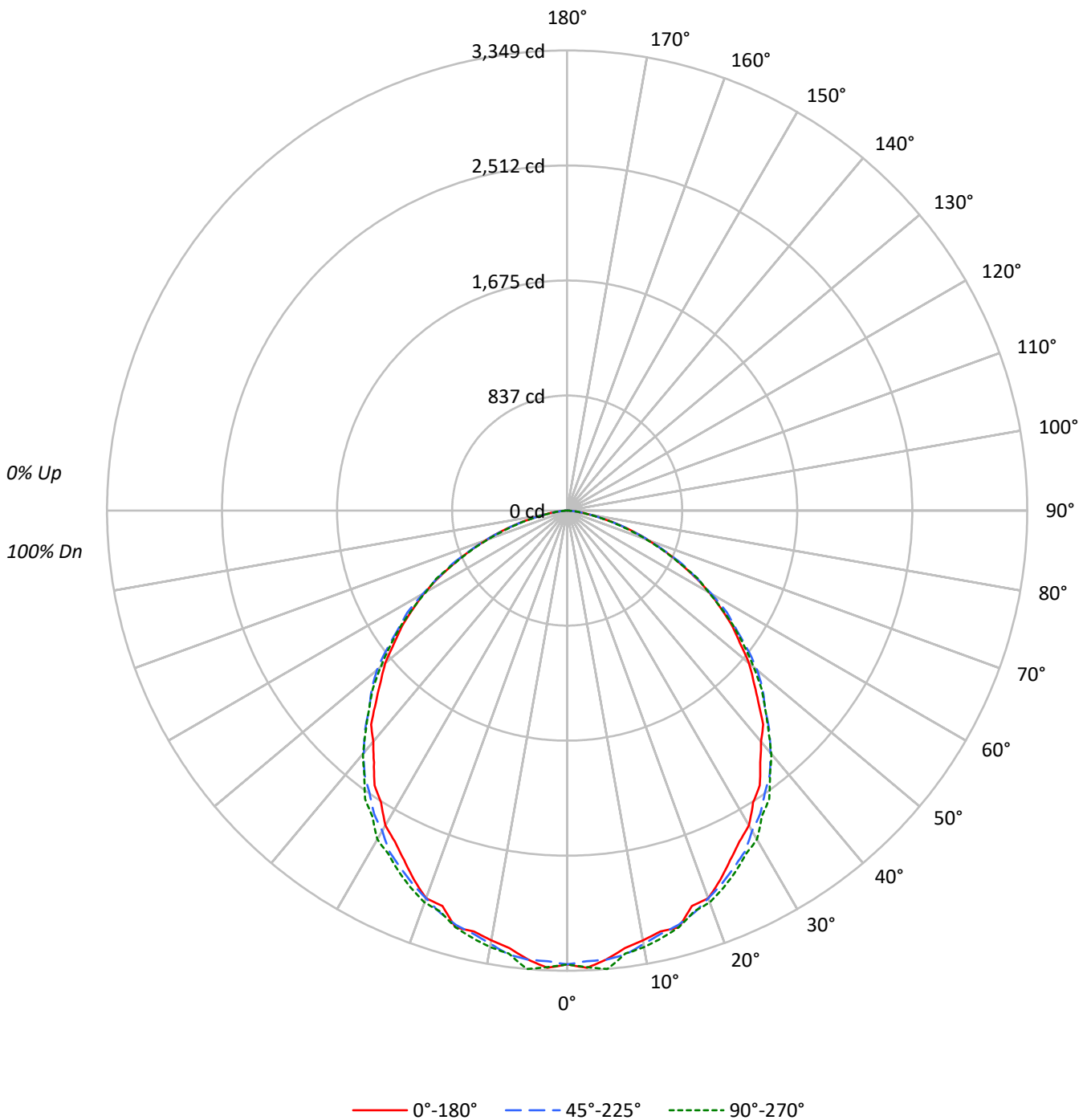
Lumens per Lamp: N/A
Luminaire Lumens: 8323.0 lumens
Efficiency: N/A
Efficacy: 96.3 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 86.4
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°	8887	8887	8887
5°	8857	8861	9047
10°	8678	8753	8815
15°	8746	8699	8747
20°	8598	8598	8690
25°	8334	8516	8610
30°	8220	8364	8587
35°	8026	8236	8421
40°	7714	8085	8121
45°	7480	7747	7758
50°	7235	7562	7417
55°	6893	7028	6977
60°	6446	6511	6393
65°	5748	5894	5707
70°	4932	4948	4810
75°	3905	3897	3746
80°	2616	2545	2445
85°	1420	1408	1315



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	310.6	3.7
10°-20°	880.4	10.6
20°-30°	1319.0	15.8
30°-40°	1563.3	18.8
40°-50°	1566.2	18.8
50°-60°	1329.4	16.0
60°-70°	896.3	10.8
70°-80°	393.8	4.7
80°-90°	64.0	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°	2510.0	30.2
0°-40°	4073.3	48.9
0°-60°	6968.9	83.7
0°-90°	8323.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8323.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3302	3302	3302	3302	3302	
5°	3279	3271	3280	3270	3349	309
15°	3140	3103	3122	3139	3140	875
25°	2807	2822	2868	2906	2900	1298
35°	2443	2450	2507	2565	2563	1517
45°	1966	2002	2036	2088	2038	1521
55°	1469	1460	1498	1488	1487	1307
65°	903	891	926	890	896	898
75°	376	368	375	348	360	403
85°	46	45	46	44	43	67
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3302.4	3302.4	3302.4	3302.4	3302.4
2.5°	3330.9	3305.8	3282.3	3309.6	3326.2
5°	3278.9	3271.2	3280.2	3270.4	3349.3
7.5°	3211.5	3241.0	3258.0	3247.4	3252.0
10°	3175.7	3165.5	3203.4	3229.9	3226.0
12.5°	3137.3	3152.7	3154.8	3183.4	3186.0
15°	3139.5	3103.2	3122.4	3138.6	3139.9
17.5°	3017.5	3056.8	3070.0	3107.1	3061.0
20°	3002.6	2974.0	3002.6	3040.6	3034.6
22.5°	2910.9	2879.0	2940.4	2974.0	2971.9
25°	2806.9	2822.2	2868.3	2905.8	2899.8
27.5°	2715.6	2733.6	2799.2	2850.8	2817.6
30°	2645.3	2636.3	2691.8	2737.8	2763.4
32.5°	2519.5	2551.9	2616.7	2662.4	2638.0
35°	2443.2	2450.4	2507.1	2565.1	2563.4
37.5°	2309.7	2343.4	2423.1	2439.4	2424.4
40°	2195.9	2229.6	2301.6	2319.1	2311.9
42.5°	2111.9	2117.9	2179.7	2199.7	2167.7
45°	1965.6	2002.3	2035.6	2088.0	2038.5
47.5°	1841.1	1858.2	1929.8	1943.9	1917.9
50°	1728.1	1734.1	1806.2	1788.7	1771.6
52.5°	1586.2	1611.3	1651.8	1648.4	1628.4
55°	1469.3	1459.5	1497.9	1487.7	1487.2
57.5°	1329.0	1346.1	1377.7	1361.4	1335.4
60°	1197.7	1198.1	1209.7	1191.3	1187.9
62.5°	1051.5	1056.6	1059.1	1036.5	1073.2
65°	902.7	890.7	925.7	890.3	896.3
67.5°	765.8	771.8	768.3	746.2	754.7
70°	626.8	634.5	628.9	603.8	611.4
72.5°	499.7	490.3	496.3	464.8	479.3
75°	375.6	368.0	374.8	348.4	360.3
77.5°	255.8	261.8	257.5	243.5	251.6
80°	168.8	164.2	164.2	156.1	157.8
82.5°	98.5	93.8	92.5	90.0	93.8
85°	46.0	44.8	45.6	44.3	42.6
87.5°	16.6	17.1	17.1	16.2	15.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)