

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: P589597

Luminaire Tested: **FMR-24-2-LD4-4HI-40-UNV-81-84-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589597
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-81-84-EDD
Description: 2X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

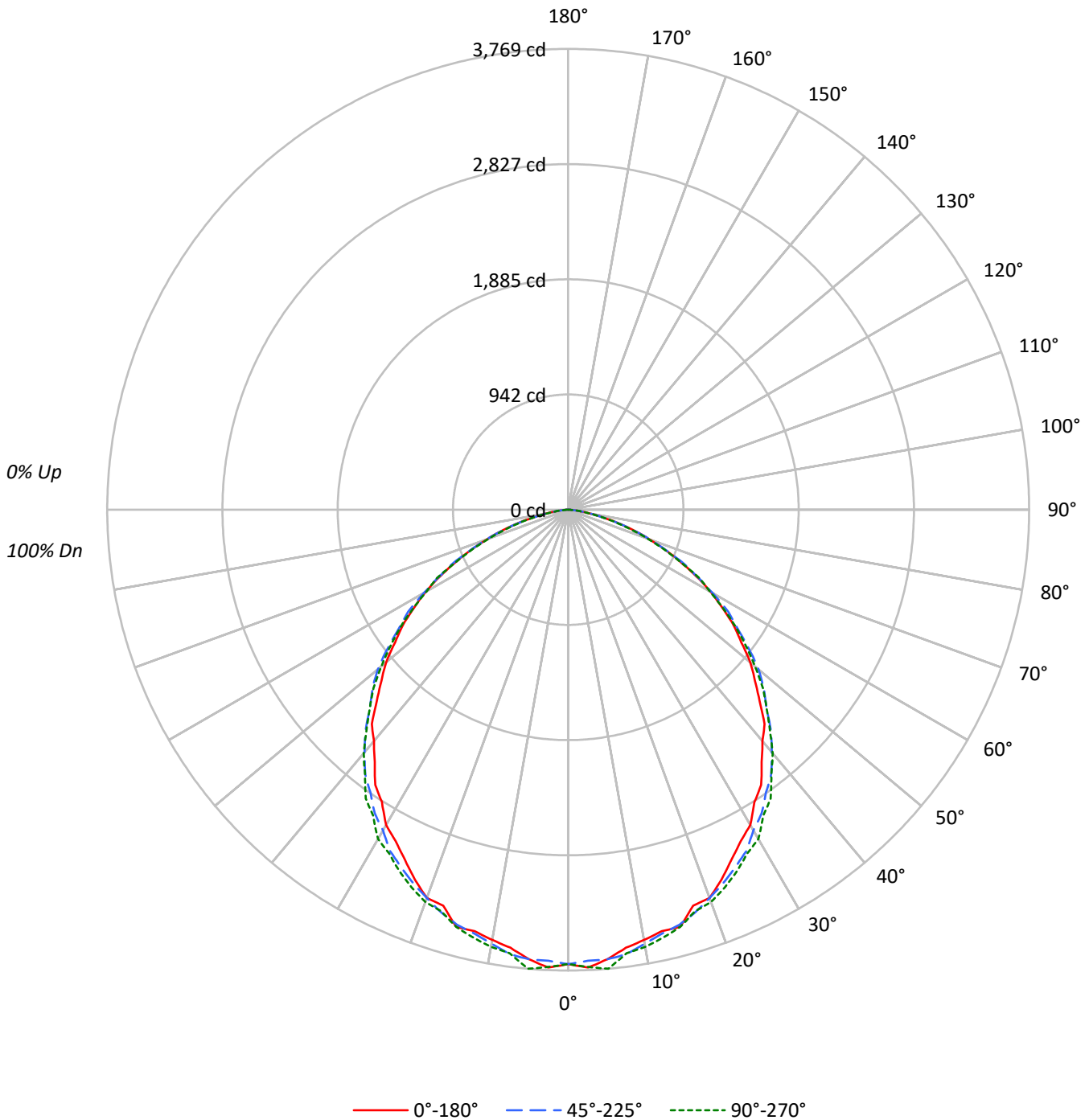
Lumens per Lamp: N/A
Luminaire Lumens: 9365.0 lumens
Efficiency: N/A
Efficacy: 108.4 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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°	9999	9999	9999
5°	9966	9970	10180
10°	9764	9849	9919
15°	9841	9788	9843
20°	9675	9675	9778
25°	9378	9583	9688
30°	9249	9411	9662
35°	9031	9267	9475
40°	8679	9098	9138
45°	8417	8716	8729
50°	8140	8508	8345
55°	7757	7907	7851
60°	7253	7325	7194
65°	6467	6632	6422
70°	5549	5568	5413
75°	4395	4384	4215
80°	2944	2862	2751
85°	1599	1584	1482



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	349.5	3.7
10°-20°	990.6	10.6
20°-30°	1484.1	15.8
30°-40°	1759.0	18.8
40°-50°	1762.2	18.8
50°-60°	1495.8	16.0
60°-70°	1008.5	10.8
70°-80°	443.1	4.7
80°-90°	72.0	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°	2824.3	30.2
0°-40°	4583.2	48.9
0°-60°	7841.3	83.7
0°-90°	9365.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9365.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3716	3716	3716	3716	3716	
5°	3689	3681	3691	3680	3769	348
15°	3532	3492	3513	3532	3533	984
25°	3158	3176	3227	3270	3263	1460
35°	2749	2757	2821	2886	2884	1707
45°	2212	2253	2290	2349	2294	1711
55°	1653	1642	1685	1674	1673	1471
65°	1016	1002	1042	1002	1008	1010
75°	423	414	422	392	405	453
85°	52	50	51	50	48	75
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3715.8	3715.8	3715.8	3715.8	3715.8
2.5°	3747.9	3719.6	3693.2	3724.0	3742.7
5°	3689.4	3680.8	3690.8	3679.8	3768.6
7.5°	3613.6	3646.7	3665.9	3653.9	3659.2
10°	3573.3	3561.8	3604.5	3634.2	3629.9
12.5°	3530.1	3547.4	3549.8	3581.9	3584.8
15°	3532.5	3491.7	3513.3	3531.6	3533.0
17.5°	3395.3	3439.4	3454.3	3496.1	3444.2
20°	3378.5	3346.4	3378.5	3421.2	3414.5
22.5°	3275.4	3239.4	3308.5	3346.4	3344.0
25°	3158.3	3175.6	3227.4	3269.6	3262.9
27.5°	3055.6	3075.8	3149.7	3207.7	3170.3
30°	2976.5	2966.4	3028.8	3080.6	3109.4
32.5°	2834.9	2871.4	2944.3	2995.7	2968.3
35°	2749.1	2757.2	2821.0	2886.3	2884.4
37.5°	2598.9	2636.8	2726.5	2744.7	2728.0
40°	2470.8	2508.7	2589.8	2609.5	2601.3
42.5°	2376.3	2383.0	2452.6	2475.1	2439.1
45°	2211.7	2253.0	2290.4	2349.4	2293.8
47.5°	2071.6	2090.8	2171.4	2187.3	2158.0
50°	1944.5	1951.2	2032.3	2012.6	1993.4
52.5°	1784.7	1813.0	1858.6	1854.8	1832.2
55°	1653.3	1642.2	1685.4	1673.9	1673.4
57.5°	1495.4	1514.6	1550.1	1531.9	1502.6
60°	1347.7	1348.1	1361.1	1340.5	1336.6
62.5°	1183.1	1188.9	1191.7	1166.3	1207.6
65°	1015.7	1002.2	1041.6	1001.8	1008.5
67.5°	861.7	868.4	864.5	839.6	849.2
70°	705.3	713.9	707.7	679.4	688.0
72.5°	562.3	551.7	558.4	522.9	539.3
75°	422.7	414.0	421.7	392.0	405.4
77.5°	287.9	294.6	289.8	273.9	283.1
80°	190.0	184.7	184.7	175.6	177.5
82.5°	110.8	105.5	104.1	101.2	105.5
85°	51.8	50.4	51.3	49.9	48.0
87.5°	18.7	19.2	19.2	18.2	17.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)