

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: P589590

Luminaire Tested: **FMR-24-2-LD4-4HI-40-UNV-80-85-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589590
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-80-85-EDD
Description: 2X2 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

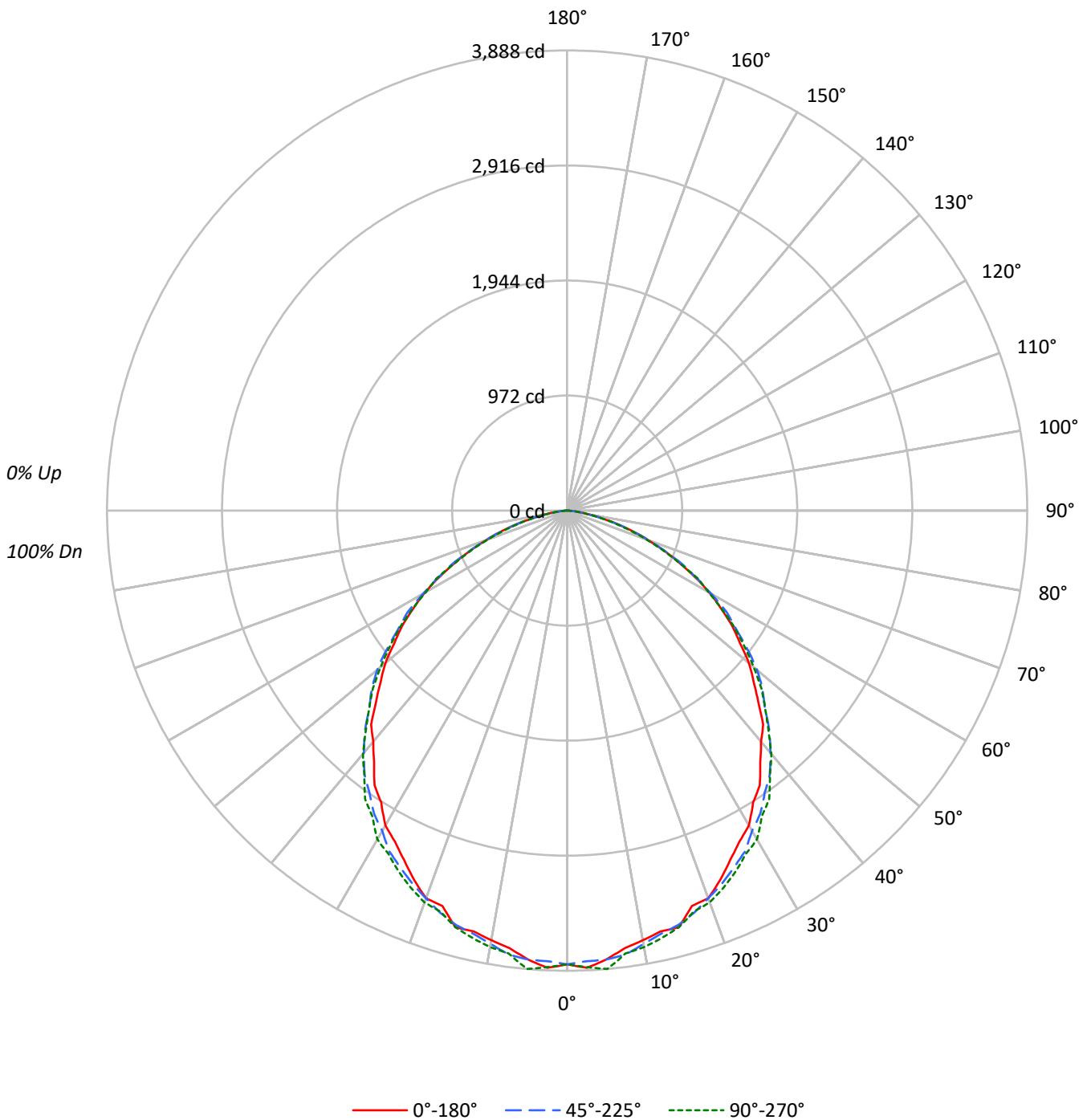
Lumens per Lamp: N/A
Luminaire Lumens: 9662.0 lumens
Efficiency: N/A
Efficacy: 111.8 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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	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					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°	10316	10316	10316
5°	10282	10286	10503
10°	10074	10162	10233
15°	10154	10098	10155
20°	9982	9982	10088
25°	9675	9886	9995
30°	9542	9710	9968
35°	9317	9561	9776
40°	8955	9386	9428
45°	8684	8993	9006
50°	8399	8778	8610
55°	8002	8158	8100
60°	7483	7558	7422
65°	6672	6842	6625
70°	5725	5744	5585
75°	4534	4524	4349
80°	3037	2954	2837
85°	1652	1636	1528



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	360.6	3.7
10°-20°	1022.0	10.6
20°-30°	1531.2	15.8
30°-40°	1814.8	18.8
40°-50°	1818.1	18.8
50°-60°	1543.3	16.0
60°-70°	1040.5	10.8
70°-80°	457.2	4.7
80°-90°	74.3	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°	2913.8	30.2
0°-40°	4728.6	48.9
0°-60°	8090.0	83.7
0°-90°	9662.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9662.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3834	3834	3834	3834	3834	
5°	3806	3798	3808	3796	3888	359
15°	3645	3602	3625	3644	3645	1015
25°	3258	3276	3330	3373	3366	1506
35°	2836	2845	2910	2978	2976	1761
45°	2282	2324	2363	2424	2366	1765
55°	1706	1694	1739	1727	1726	1517
65°	1048	1034	1075	1034	1040	1042
75°	436	427	435	404	418	467
85°	54	52	53	52	50	78
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3833.6	3833.6	3833.6	3833.6	3833.6
2.5°	3866.8	3837.6	3810.4	3842.1	3861.4
5°	3806.4	3797.5	3807.9	3796.5	3888.1
7.5°	3728.2	3762.4	3782.2	3769.8	3775.2
10°	3686.6	3674.7	3718.8	3749.5	3745.0
12.5°	3642.1	3659.9	3662.4	3695.5	3698.5
15°	3644.6	3602.5	3624.8	3643.6	3645.0
17.5°	3503.0	3548.5	3563.9	3606.9	3553.5
20°	3485.7	3452.5	3485.7	3529.7	3522.8
22.5°	3379.2	3342.1	3413.4	3452.5	3450.0
25°	3258.5	3276.3	3329.7	3373.3	3366.4
27.5°	3152.5	3173.3	3249.6	3309.5	3270.8
30°	3070.9	3060.5	3124.8	3178.3	3208.0
32.5°	2924.9	2962.5	3037.7	3090.7	3062.5
35°	2836.2	2844.7	2910.5	2977.8	2975.8
37.5°	2681.3	2720.4	2813.0	2831.8	2814.5
40°	2549.2	2588.3	2671.9	2692.2	2683.8
42.5°	2451.6	2458.6	2530.3	2553.6	2516.5
45°	2281.9	2324.4	2363.0	2423.9	2366.5
47.5°	2137.3	2157.1	2240.3	2256.6	2226.4
50°	2006.2	2013.1	2096.7	2076.5	2056.7
52.5°	1841.3	1870.5	1917.6	1913.6	1890.3
55°	1705.7	1694.3	1738.9	1727.0	1726.5
57.5°	1542.9	1562.7	1599.3	1580.5	1550.3
60°	1390.4	1390.9	1404.3	1383.0	1379.0
62.5°	1220.6	1226.6	1229.5	1203.3	1245.9
65°	1047.9	1034.0	1074.6	1033.5	1040.5
67.5°	889.0	895.9	892.0	866.2	876.1
70°	727.6	736.5	730.1	700.9	709.8
72.5°	580.1	569.2	576.2	539.5	556.4
75°	436.1	427.2	435.1	404.4	418.3
77.5°	297.0	303.9	299.0	282.6	292.0
80°	196.0	190.6	190.6	181.2	183.1
82.5°	114.3	108.9	107.4	104.4	108.9
85°	53.5	52.0	53.0	51.5	49.5
87.5°	19.3	19.8	19.8	18.8	17.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)