

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: P589600

Luminaire Tested: **FMR-24-2-LD4-4HI-40-UNV-81-87-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589600
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-81-87-EDD
Description: 2X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

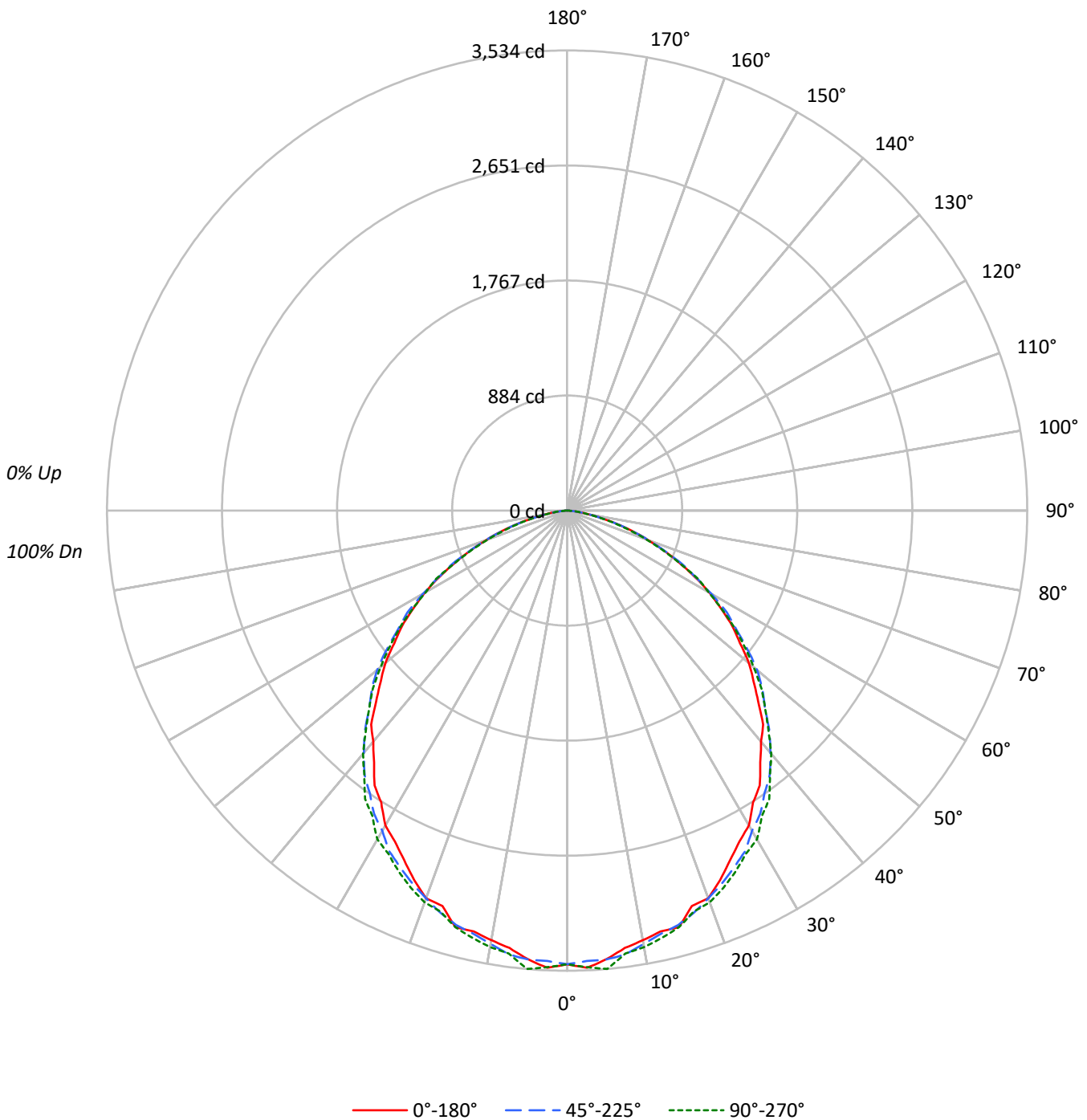
Lumens per Lamp: N/A
Luminaire Lumens: 8781.0 lumens
Efficiency: N/A
Efficacy: 101.6 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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°	9376	9376	9376
5°	9344	9348	9545
10°	9155	9235	9300
15°	9227	9177	9229
20°	9072	9072	9168
25°	8793	8985	9084
30°	8672	8824	9059
35°	8468	8689	8884
40°	8138	8530	8568
45°	7892	8173	8185
50°	7633	7978	7825
55°	7273	7414	7362
60°	6801	6868	6745
65°	6064	6218	6021
70°	5203	5220	5076
75°	4120	4111	3952
80°	2760	2684	2579
85°	1501	1485	1389



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	327.7	3.7
10°-20°	928.8	10.6
20°-30°	1391.6	15.8
30°-40°	1649.3	18.8
40°-50°	1652.3	18.8
50°-60°	1402.6	16.0
60°-70°	945.6	10.8
70°-80°	415.5	4.7
80°-90°	67.5	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°	2648.1	30.2
0°-40°	4297.4	48.9
0°-60°	7352.4	83.7
0°-90°	8781.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8781.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3484	3484	3484	3484	3484	
5°	3459	3451	3461	3450	3534	326
15°	3312	3274	3294	3311	3313	923
25°	2961	2978	3026	3066	3059	1369
35°	2578	2585	2645	2706	2704	1600
45°	2074	2112	2148	2203	2151	1604
55°	1550	1540	1580	1570	1569	1379
65°	952	940	977	939	946	947
75°	396	388	395	368	380	425
85°	49	47	48	47	45	70
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3484.1	3484.1	3484.1	3484.1	3484.1
2.5°	3514.2	3487.7	3462.9	3491.7	3509.3
5°	3459.3	3451.2	3460.7	3450.3	3533.6
7.5°	3388.3	3419.3	3437.3	3426.0	3431.0
10°	3350.5	3339.7	3379.7	3407.6	3403.6
12.5°	3310.0	3326.2	3328.4	3358.6	3361.3
15°	3312.2	3274.0	3294.2	3311.3	3312.7
17.5°	3183.6	3225.0	3238.9	3278.0	3229.5
20°	3167.8	3137.7	3167.8	3207.9	3201.6
22.5°	3071.1	3037.4	3102.2	3137.7	3135.4
25°	2961.4	2977.5	3026.1	3065.7	3059.4
27.5°	2865.1	2884.0	2953.3	3007.7	2972.6
30°	2790.9	2781.4	2839.9	2888.5	2915.5
32.5°	2658.2	2692.3	2760.7	2808.9	2783.2
35°	2577.6	2585.3	2645.1	2706.3	2704.5
37.5°	2436.8	2472.4	2556.5	2573.6	2557.8
40°	2316.7	2352.3	2428.3	2446.7	2439.1
42.5°	2228.1	2234.4	2299.6	2320.8	2287.0
45°	2073.8	2112.5	2147.6	2202.9	2150.7
47.5°	1942.4	1960.4	2036.0	2050.9	2023.4
50°	1823.2	1829.5	1905.6	1887.1	1869.1
52.5°	1673.4	1700.0	1742.7	1739.1	1718.0
55°	1550.2	1539.8	1580.3	1569.5	1569.1
57.5°	1402.2	1420.2	1453.5	1436.4	1408.9
60°	1263.6	1264.1	1276.2	1256.9	1253.3
62.5°	1109.3	1114.7	1117.4	1093.6	1132.3
65°	952.3	939.7	976.6	939.3	945.6
67.5°	807.9	814.2	810.6	787.2	796.2
70°	661.3	669.4	663.5	637.0	645.1
72.5°	527.2	517.3	523.6	490.3	505.6
75°	396.3	388.2	395.4	367.5	380.1
77.5°	269.9	276.2	271.7	256.9	265.4
80°	178.1	173.2	173.2	164.6	166.4
82.5°	103.9	99.0	97.6	94.9	99.0
85°	48.6	47.2	48.1	46.8	45.0
87.5°	17.5	18.0	18.0	17.1	16.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)