

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: P589573

Luminaire Tested: **FMR-24-2-LD4-4HI-35-UNV-82-84-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589573
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-35-UNV-82-84-EDD
Description: 2X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

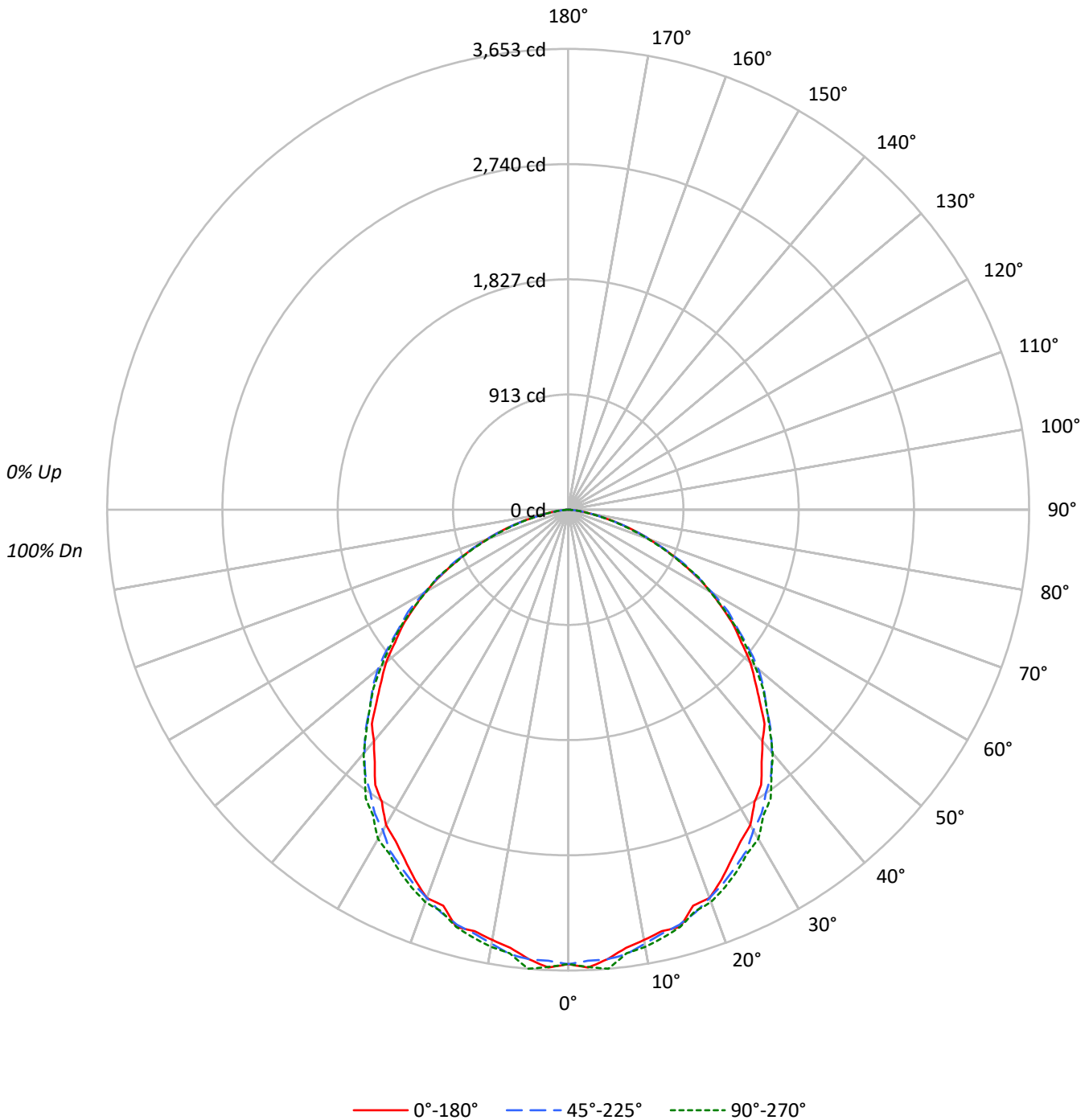
Lumens per Lamp: N/A
Luminaire Lumens: 9077.0 lumens
Efficiency: N/A
Efficacy: 105.1 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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°	9692	9692	9692
5°	9659	9663	9867
10°	9464	9546	9614
15°	9539	9487	9540
20°	9377	9377	9477
25°	9089	9288	9390
30°	8964	9122	9364
35°	8753	8982	9184
40°	8413	8818	8857
45°	8158	8448	8461
50°	7890	8246	8089
55°	7518	7664	7610
60°	7030	7100	6972
65°	6268	6428	6224
70°	5378	5397	5246
75°	4260	4249	4085
80°	2853	2774	2667
85°	1550	1538	1436



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	338.8	3.7
10°-20°	960.1	10.6
20°-30°	1438.5	15.8
30°-40°	1704.9	18.8
40°-50°	1708.0	18.8
50°-60°	1449.8	16.0
60°-70°	977.5	10.8
70°-80°	429.5	4.7
80°-90°	69.8	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°	2737.4	30.2
0°-40°	4442.3	48.9
0°-60°	7600.2	83.7
0°-90°	9077.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9077.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3602	3602	3602	3602	3602	
5°	3576	3568	3577	3567	3653	337
15°	3424	3384	3405	3423	3424	954
25°	3061	3078	3128	3169	3163	1415
35°	2664	2672	2734	2798	2796	1654
45°	2144	2184	2220	2277	2223	1658
55°	1602	1592	1634	1622	1622	1425
65°	984	971	1010	971	978	979
75°	410	401	409	380	393	439
85°	50	49	50	48	46	73
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3601.5	3601.5	3601.5	3601.5	3601.5
2.5°	3632.7	3605.2	3579.7	3609.4	3627.6
5°	3575.9	3567.6	3577.3	3566.6	3652.7
7.5°	3502.5	3534.6	3553.2	3541.5	3546.7
10°	3463.4	3452.3	3493.6	3522.5	3518.3
12.5°	3421.6	3438.3	3440.6	3471.8	3474.6
15°	3423.9	3384.4	3405.3	3423.0	3424.4
17.5°	3290.9	3333.7	3348.1	3388.5	3338.3
20°	3274.6	3243.5	3274.6	3316.0	3309.5
22.5°	3174.6	3139.8	3206.7	3243.5	3241.1
25°	3061.2	3077.9	3128.1	3169.1	3162.6
27.5°	2961.7	2981.2	3052.8	3109.1	3072.8
30°	2884.9	2875.2	2935.6	2985.8	3013.7
32.5°	2747.8	2783.1	2853.8	2903.5	2877.0
35°	2664.5	2672.4	2734.3	2797.5	2795.7
37.5°	2519.0	2555.7	2642.7	2660.3	2644.1
40°	2394.8	2431.6	2510.1	2529.2	2521.3
42.5°	2303.2	2309.7	2377.1	2399.0	2364.1
45°	2143.7	2183.7	2220.0	2277.2	2223.2
47.5°	2007.9	2026.5	2104.6	2120.0	2091.6
50°	1884.7	1891.2	1969.8	1950.7	1932.1
52.5°	1729.8	1757.3	1801.5	1797.7	1775.9
55°	1602.4	1591.7	1633.6	1622.4	1622.0
57.5°	1449.4	1468.0	1502.5	1484.8	1456.4
60°	1306.2	1306.7	1319.2	1299.2	1295.5
62.5°	1146.7	1152.3	1155.1	1130.4	1170.4
65°	984.4	971.4	1009.5	970.9	977.5
67.5°	835.2	841.7	838.0	813.8	823.1
70°	683.6	691.9	685.9	658.5	666.8
72.5°	545.0	534.8	541.3	506.9	522.7
75°	409.7	401.3	408.7	379.9	392.9
77.5°	279.0	285.5	280.9	265.5	274.4
80°	184.1	179.0	179.0	170.2	172.1
82.5°	107.4	102.3	100.9	98.1	102.3
85°	50.2	48.8	49.8	48.4	46.5
87.5°	18.1	18.6	18.6	17.7	16.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)