

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: P589611

Luminaire Tested: **FMR-24-2-LD4-4HI-40-UNV-82-96-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589611
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-82-96-EDD
Description: 2X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

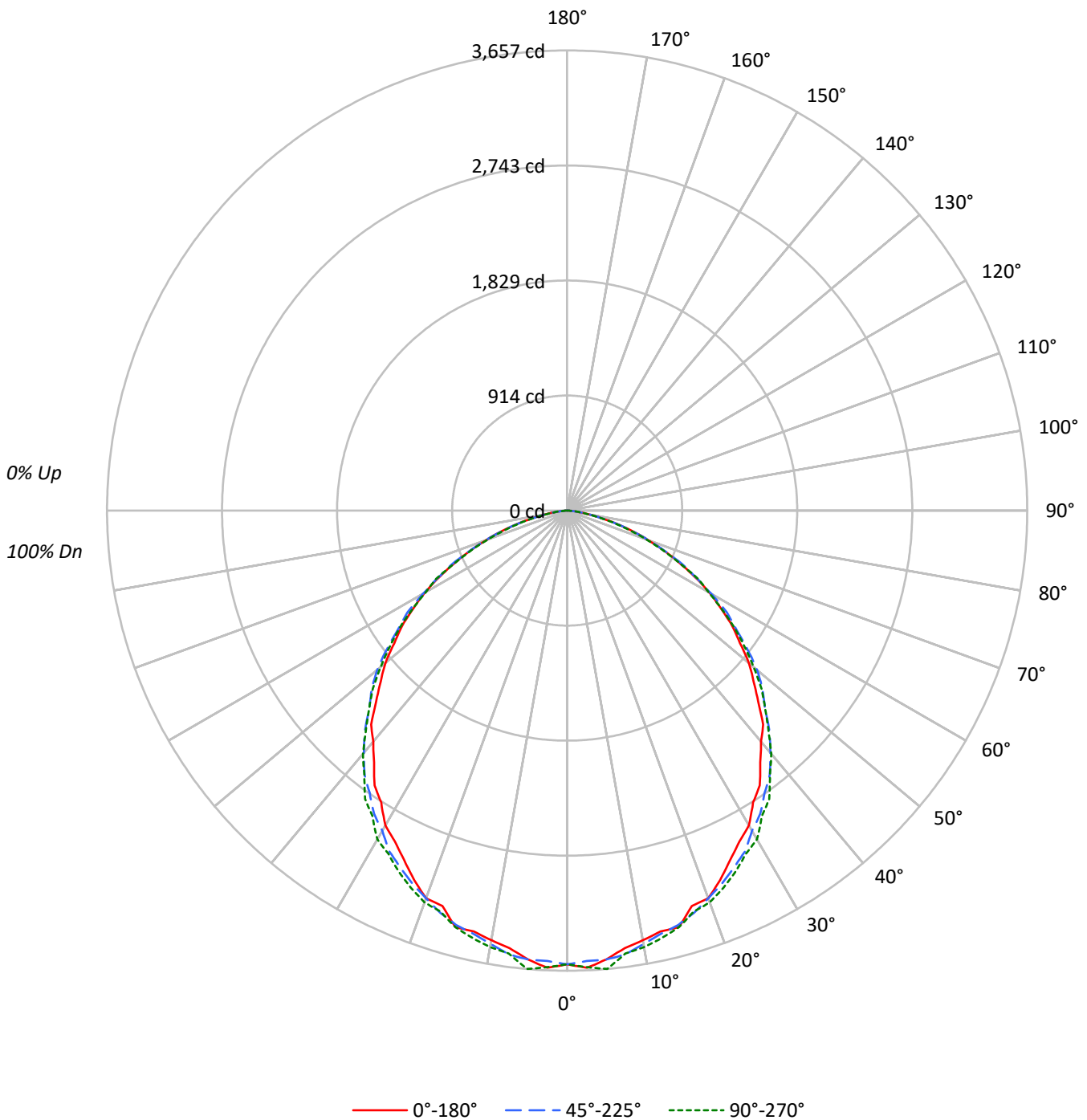
Lumens per Lamp: N/A
Luminaire Lumens: 9087.0 lumens
Efficiency: N/A
Efficacy: 105.2 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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°	9702	9702	9702
5°	9670	9674	9878
10°	9474	9557	9624
15°	9549	9497	9550
20°	9388	9388	9488
25°	9099	9298	9400
30°	8974	9132	9375
35°	8763	8992	9194
40°	8422	8827	8867
45°	8167	8458	8470
50°	7899	8256	8098
55°	7526	7673	7618
60°	7038	7108	6980
65°	6275	6436	6230
70°	5384	5402	5253
75°	4264	4255	4090
80°	2856	2777	2669
85°	1553	1538	1439



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	339.2	3.7
10°-20°	961.2	10.6
20°-30°	1440.1	15.8
30°-40°	1706.8	18.8
40°-50°	1709.9	18.8
50°-60°	1451.4	16.0
60°-70°	978.6	10.8
70°-80°	430.0	4.7
80°-90°	69.9	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°	2740.4	30.2
0°-40°	4447.2	48.9
0°-60°	7608.6	83.7
0°-90°	9087.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9087.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3606	3606	3606	3606	3606	
5°	3580	3572	3581	3571	3657	337
15°	3428	3388	3409	3427	3428	955
25°	3065	3081	3132	3173	3166	1417
35°	2668	2675	2737	2801	2799	1656
45°	2146	2186	2222	2280	2226	1660
55°	1604	1594	1635	1624	1624	1427
65°	986	972	1011	972	978	980
75°	410	402	409	380	393	440
85°	50	49	50	48	47	73
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3605.5	3605.5	3605.5	3605.5	3605.5
2.5°	3636.7	3609.2	3583.6	3613.4	3631.6
5°	3579.9	3571.5	3581.3	3570.6	3656.7
7.5°	3506.3	3538.5	3557.1	3545.4	3550.6
10°	3467.2	3456.1	3497.5	3526.4	3522.2
12.5°	3425.3	3442.1	3444.4	3475.6	3478.4
15°	3427.7	3388.1	3409.0	3426.7	3428.1
17.5°	3294.5	3337.3	3351.8	3392.3	3342.0
20°	3278.2	3247.0	3278.2	3319.7	3313.1
22.5°	3178.1	3143.2	3210.3	3247.0	3244.7
25°	3064.6	3081.3	3131.6	3172.6	3166.0
27.5°	2964.9	2984.5	3056.2	3112.5	3076.2
30°	2888.1	2878.3	2938.9	2989.1	3017.1
32.5°	2750.8	2786.2	2856.9	2906.7	2880.2
35°	2667.5	2675.4	2737.3	2800.6	2798.7
37.5°	2521.7	2558.5	2645.6	2663.3	2647.0
40°	2397.5	2434.2	2512.9	2532.0	2524.1
42.5°	2305.7	2312.3	2379.8	2401.6	2366.7
45°	2146.1	2186.1	2222.4	2279.7	2225.7
47.5°	2010.1	2028.8	2107.0	2122.3	2093.9
50°	1886.8	1893.3	1972.0	1952.9	1934.3
52.5°	1731.8	1759.2	1803.4	1799.7	1777.8
55°	1604.2	1593.5	1635.4	1624.2	1623.8
57.5°	1451.0	1469.7	1504.1	1486.4	1458.0
60°	1307.7	1308.1	1320.7	1300.7	1297.0
62.5°	1148.0	1153.6	1156.4	1131.7	1171.7
65°	985.5	972.5	1010.7	972.0	978.5
67.5°	836.1	842.6	838.9	814.7	824.0
70°	684.3	692.7	686.6	659.2	667.6
72.5°	545.6	535.4	541.9	507.4	523.3
75°	410.1	401.7	409.2	380.3	393.4
77.5°	279.3	285.8	281.2	265.8	274.7
80°	184.3	179.2	179.2	170.4	172.2
82.5°	107.5	102.4	101.0	98.2	102.4
85°	50.3	48.9	49.8	48.4	46.6
87.5°	18.2	18.6	18.6	17.7	16.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)