

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: P589161

Luminaire Tested: **FMR-24-2-LD4-2LO-50-UNV-82-88-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589161
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-LD4-2LO-50-UNV-82-88-EDD
Description: 2X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

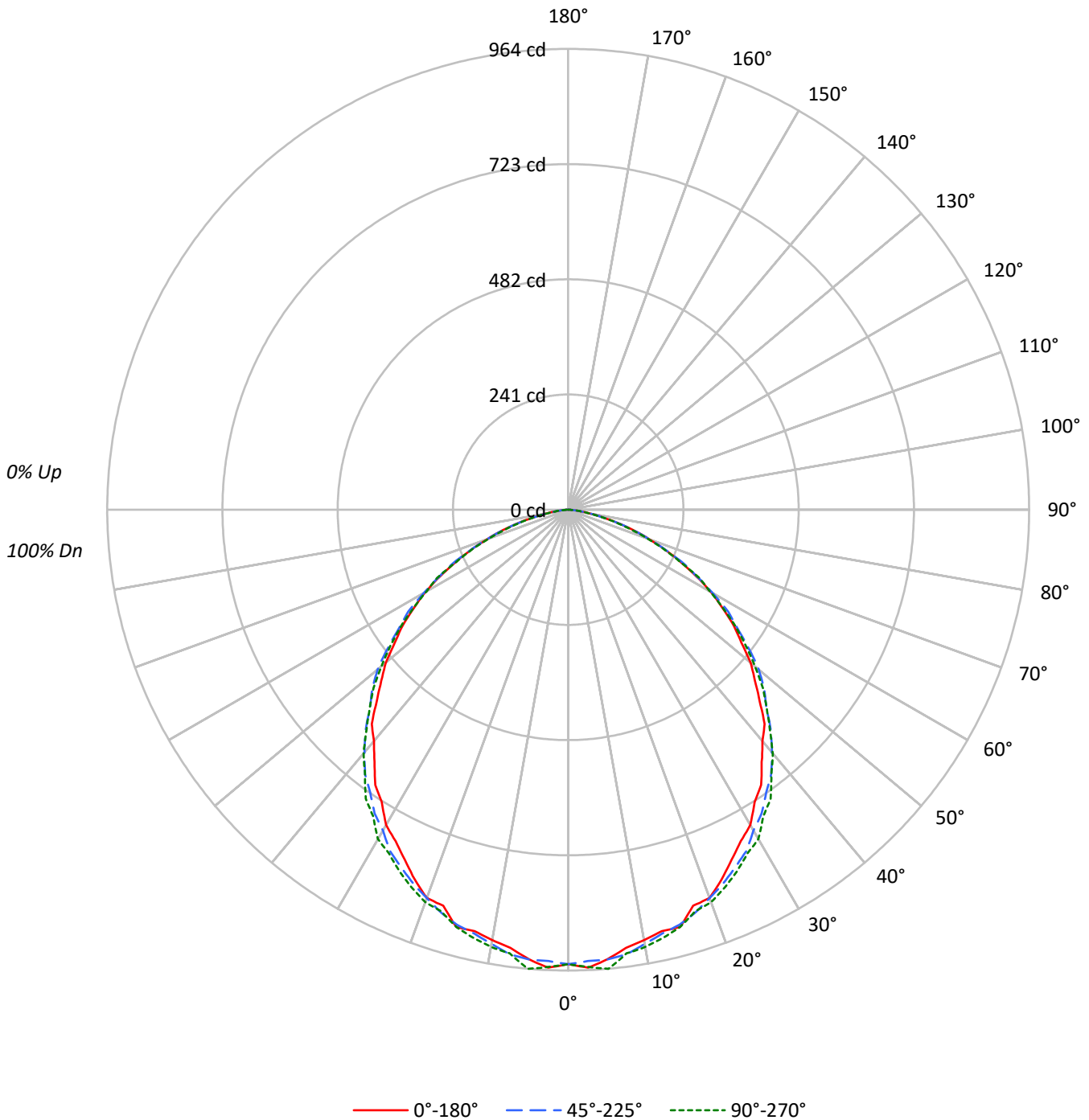
Lumens per Lamp: N/A
Luminaire Lumens: 2396.0 lumens
Efficiency: N/A
Efficacy: 102.4 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 23.4
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°	2558	2558	2558
5°	2550	2551	2605
10°	2498	2520	2538
15°	2518	2504	2518
20°	2475	2475	2502
25°	2399	2452	2479
30°	2366	2408	2472
35°	2310	2371	2424
40°	2220	2328	2338
45°	2154	2230	2234
50°	2083	2177	2135
55°	1985	2023	2008
60°	1856	1874	1841
65°	1655	1697	1643
70°	1419	1425	1385
75°	1124	1122	1078
80°	753	733	704
85°	411	404	380



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	89.4	3.7
10°-20°	253.4	10.6
20°-30°	379.7	15.8
30°-40°	450.0	18.8
40°-50°	450.9	18.8
50°-60°	382.7	16.0
60°-70°	258.0	10.8
70°-80°	113.4	4.7
80°-90°	18.4	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°	722.6	30.2
0°-40°	1172.6	48.9
0°-60°	2006.2	83.7
0°-90°	2396.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2396.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	951	951	951	951	951	
5°	944	942	944	942	964	89
15°	904	893	899	904	904	252
25°	808	812	826	836	835	374
35°	703	705	722	738	738	437
45°	566	576	586	601	587	438
55°	423	420	431	428	428	376
65°	260	256	266	256	258	258
75°	108	106	108	100	104	116
85°	13	13	13	13	12	19
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	950.7	950.7	950.7	950.7	950.7
2.5°	958.9	951.7	944.9	952.8	957.5
5°	943.9	941.7	944.3	941.5	964.2
7.5°	924.5	933.0	937.9	934.8	936.2
10°	914.2	911.3	922.2	929.8	928.7
12.5°	903.2	907.6	908.2	916.4	917.2
15°	903.8	893.3	898.9	903.5	903.9
17.5°	868.7	880.0	883.8	894.5	881.2
20°	864.4	856.2	864.4	875.3	873.6
22.5°	838.0	828.8	846.5	856.2	855.5
25°	808.0	812.5	825.7	836.5	834.8
27.5°	781.8	786.9	805.8	820.7	811.1
30°	761.5	758.9	774.9	788.2	795.5
32.5°	725.3	734.6	753.3	766.4	759.4
35°	703.3	705.4	721.7	738.4	738.0
37.5°	664.9	674.6	697.6	702.2	697.9
40°	632.1	641.8	662.6	667.6	665.5
42.5°	608.0	609.7	627.5	633.2	624.0
45°	565.9	576.4	586.0	601.1	586.9
47.5°	530.0	534.9	555.6	559.6	552.1
50°	497.5	499.2	520.0	514.9	510.0
52.5°	456.6	463.9	475.5	474.5	468.8
55°	423.0	420.2	431.2	428.3	428.1
57.5°	382.6	387.5	396.6	391.9	384.4
60°	344.8	344.9	348.2	343.0	342.0
62.5°	302.7	304.2	304.9	298.4	309.0
65°	259.9	256.4	266.5	256.3	258.0
67.5°	220.5	222.2	221.2	214.8	217.3
70°	180.4	182.6	181.1	173.8	176.0
72.5°	143.9	141.2	142.9	133.8	138.0
75°	108.1	105.9	107.9	100.3	103.7
77.5°	73.6	75.4	74.1	70.1	72.4
80°	48.6	47.3	47.3	44.9	45.4
82.5°	28.4	27.0	26.6	25.9	27.0
85°	13.3	12.9	13.1	12.8	12.3
87.5°	4.8	4.9	4.9	4.7	4.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)