

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: P589609

Luminaire Tested: **FMR-24-2-LD4-4HI-40-UNV-82-88-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589609
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-82-88-EDD
Description: 2X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

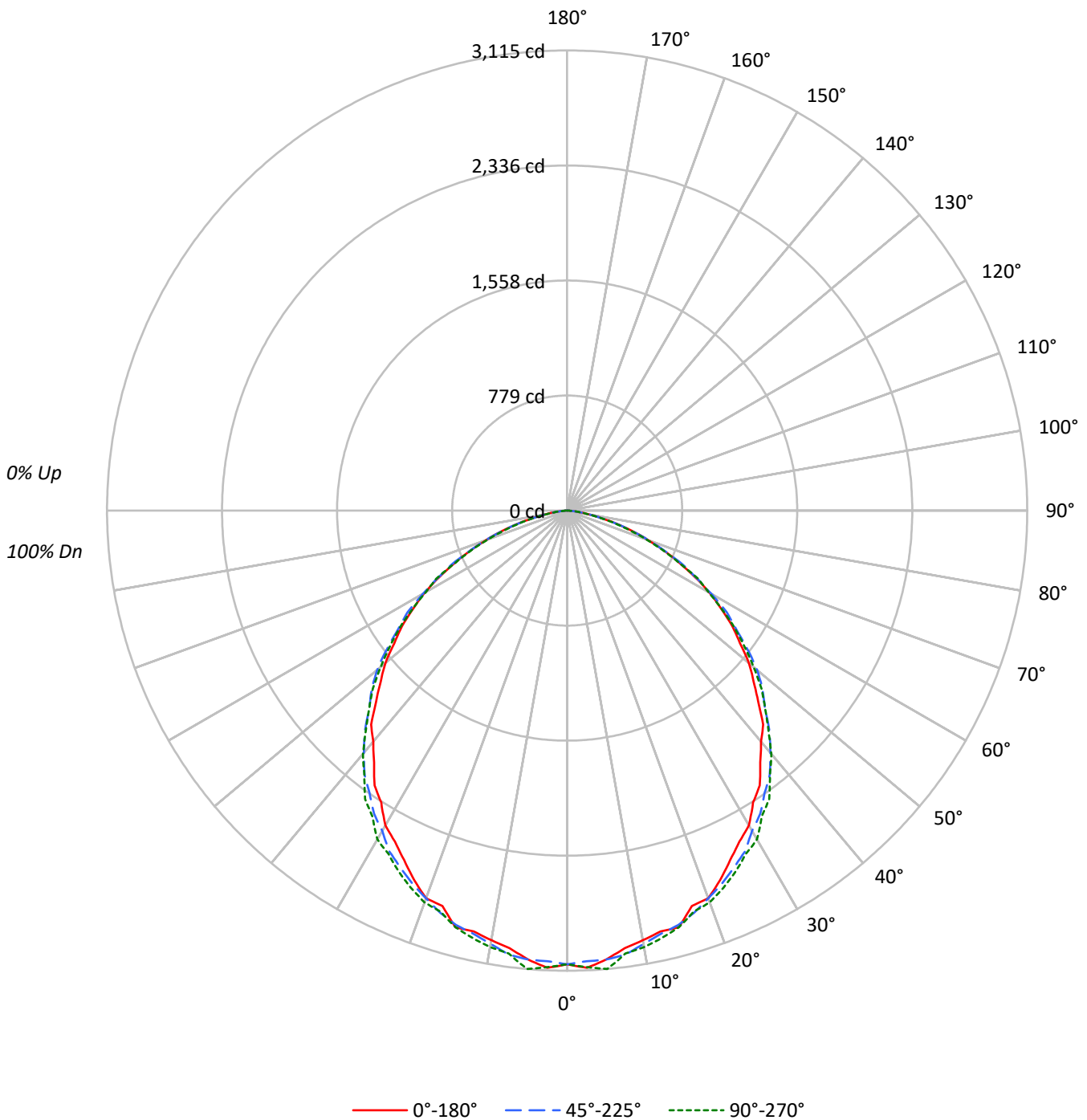
Lumens per Lamp: N/A
Luminaire Lumens: 7741.0 lumens
Efficiency: N/A
Efficacy: 89.6 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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°	8265	8265	8265
5°	8238	8241	8415
10°	8071	8141	8199
15°	8135	8091	8136
20°	7997	7997	8082
25°	7751	7921	8008
30°	7645	7779	7986
35°	7465	7660	7832
40°	7174	7520	7553
45°	6957	7205	7215
50°	6729	7033	6898
55°	6412	6536	6489
60°	5996	6055	5946
65°	5345	5482	5308
70°	4587	4602	4474
75°	3633	3624	3484
80°	2433	2366	2273
85°	1321	1309	1226



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	288.9	3.7
10°-20°	818.8	10.6
20°-30°	1226.8	15.8
30°-40°	1454.0	18.8
40°-50°	1456.7	18.8
50°-60°	1236.4	16.0
60°-70°	833.6	10.8
70°-80°	366.3	4.7
80°-90°	59.5	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°	2334.5	30.2
0°-40°	3788.5	48.9
0°-60°	6481.6	83.7
0°-90°	7741.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7741.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3071	3071	3071	3071	3071	
5°	3050	3042	3051	3042	3115	288
15°	2920	2886	2904	2919	2920	814
25°	2611	2625	2668	2703	2697	1207
35°	2272	2279	2332	2386	2384	1411
45°	1828	1862	1893	1942	1896	1414
55°	1367	1358	1393	1384	1383	1216
65°	840	828	861	828	834	835
75°	349	342	349	324	335	374
85°	43	42	42	41	40	62
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3071.4	3071.4	3071.4	3071.4	3071.4
2.5°	3098.0	3074.6	3052.8	3078.2	3093.6
5°	3049.6	3042.5	3050.8	3041.7	3115.1
7.5°	2987.0	3014.3	3030.2	3020.3	3024.6
10°	2953.7	2944.1	2979.4	3004.0	3000.4
12.5°	2918.0	2932.2	2934.2	2960.8	2963.2
15°	2919.9	2886.2	2904.1	2919.2	2920.3
17.5°	2806.5	2843.0	2855.3	2889.8	2847.0
20°	2792.6	2766.1	2792.6	2827.9	2822.4
22.5°	2707.4	2677.6	2734.7	2766.1	2764.1
25°	2610.6	2624.9	2667.7	2702.6	2697.1
27.5°	2525.8	2542.4	2603.5	2651.5	2620.5
30°	2460.3	2452.0	2503.5	2546.4	2570.2
32.5°	2343.3	2373.5	2433.7	2476.2	2453.6
35°	2272.3	2279.1	2331.8	2385.8	2384.2
37.5°	2148.2	2179.5	2253.7	2268.8	2254.9
40°	2042.3	2073.7	2140.7	2156.9	2150.2
42.5°	1964.2	1969.8	2027.3	2045.9	2016.2
45°	1828.2	1862.3	1893.2	1942.0	1896.0
47.5°	1712.4	1728.3	1794.9	1808.0	1783.8
50°	1607.3	1612.8	1679.9	1663.6	1647.7
52.5°	1475.2	1498.6	1536.3	1533.1	1514.5
55°	1366.6	1357.5	1393.1	1383.6	1383.2
57.5°	1236.1	1252.0	1281.3	1266.2	1242.1
60°	1114.0	1114.4	1125.1	1108.0	1104.8
62.5°	977.9	982.7	985.1	964.1	998.2
65°	839.5	828.4	861.0	828.0	833.6
67.5°	712.2	717.8	714.6	694.0	701.9
70°	583.0	590.1	584.9	561.5	568.7
72.5°	464.8	456.1	461.6	432.3	445.7
75°	349.4	342.2	348.6	324.0	335.1
77.5°	237.9	243.5	239.5	226.4	234.0
80°	157.0	152.7	152.7	145.1	146.7
82.5°	91.6	87.2	86.1	83.7	87.2
85°	42.8	41.6	42.4	41.2	39.7
87.5°	15.5	15.9	15.9	15.1	14.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)