

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: P589498

Luminaire Tested: **FMR-24-2-LD4-3STD-40-UNV-80-94-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P589498  
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-LD4-3STD-40-UNV-80-94-EDD  
Description: 2X2 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

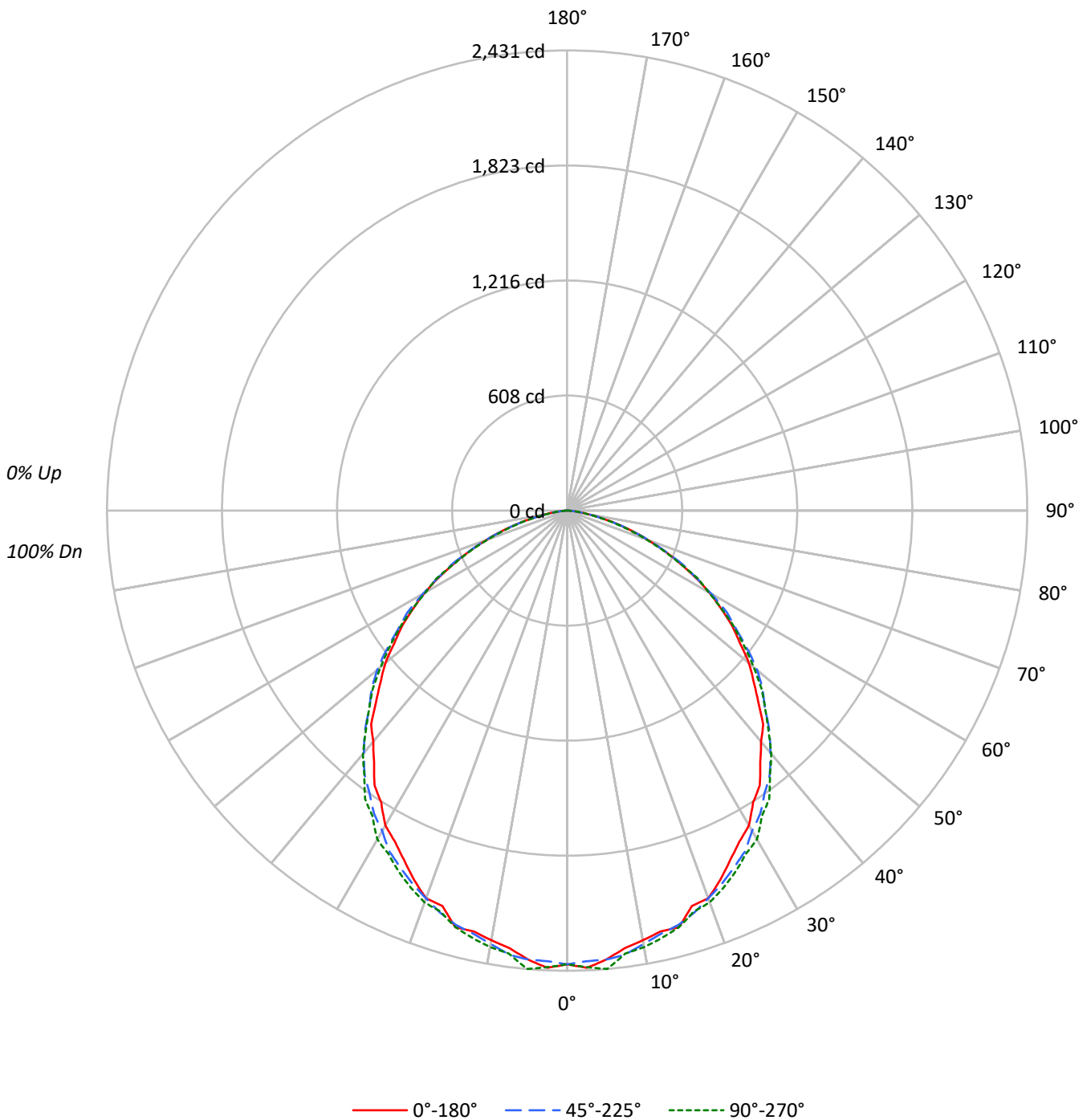
Lumens per Lamp: N/A  
Luminaire Lumens: 6041.0 lumens  
Efficiency: N/A  
Efficacy: 120.8 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 50  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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°	6450	6450	6450
5°	6429	6431	6567
10°	6298	6353	6398
15°	6348	6314	6349
20°	6241	6241	6308
25°	6049	6182	6250
30°	5966	6071	6232
35°	5825	5978	6112
40°	5599	5869	5895
45°	5429	5623	5631
50°	5251	5488	5383
55°	5004	5101	5065
60°	4679	4725	4640
65°	4172	4278	4142
70°	3579	3592	3492
75°	2835	2828	2719
80°	1900	1846	1774
85°	1031	1022	954



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	225.5	3.7
10°-20°	639.0	10.6
20°-30°	957.4	15.8
30°-40°	1134.7	18.8
40°-50°	1136.8	18.8
50°-60°	964.9	16.0
60°-70°	650.5	10.8
70°-80°	285.8	4.7
80°-90°	46.5	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°	1821.8	30.2
0°-40°	2956.5	48.9
0°-60°	5058.2	83.7
0°-90°	6041.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6041.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2397	2397	2397	2397	2397	
5°	2380	2374	2381	2374	2431	224
15°	2279	2252	2266	2278	2279	635
25°	2037	2048	2082	2109	2105	942
35°	1773	1779	1820	1862	1861	1101
45°	1427	1453	1478	1516	1480	1104
55°	1066	1059	1087	1080	1080	949
65°	655	646	672	646	650	652
75°	273	267	272	253	262	292
85°	33	32	33	32	31	48
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2396.9	2396.9	2396.9	2396.9	2396.9
2.5°	2417.7	2399.4	2382.4	2402.2	2414.2
5°	2379.9	2374.3	2380.8	2373.7	2431.0
7.5°	2331.0	2352.4	2364.7	2357.0	2360.4
10°	2305.0	2297.6	2325.1	2344.3	2341.5
12.5°	2277.1	2288.3	2289.8	2310.6	2312.4
15°	2278.7	2252.4	2266.3	2278.1	2279.0
17.5°	2190.2	2218.7	2228.3	2255.2	2221.8
20°	2179.4	2158.6	2179.4	2206.9	2202.6
22.5°	2112.8	2089.6	2134.2	2158.6	2157.1
25°	2037.3	2048.4	2081.9	2109.1	2104.8
27.5°	1971.1	1984.1	2031.7	2069.2	2045.0
30°	1920.0	1913.5	1953.7	1987.2	2005.7
32.5°	1828.7	1852.2	1899.3	1932.4	1914.7
35°	1773.3	1778.6	1819.7	1861.8	1860.6
37.5°	1676.4	1700.9	1758.8	1770.5	1759.7
40°	1593.8	1618.3	1670.6	1683.3	1678.0
42.5°	1532.9	1537.2	1582.1	1596.6	1573.4
45°	1426.7	1453.3	1477.5	1515.5	1479.6
47.5°	1336.3	1348.7	1400.7	1410.9	1392.0
50°	1254.3	1258.7	1311.0	1298.3	1285.9
52.5°	1151.3	1169.5	1198.9	1196.4	1181.9
55°	1066.5	1059.3	1087.2	1079.8	1079.5
57.5°	964.6	977.0	999.9	988.2	969.3
60°	869.3	869.6	878.0	864.7	862.2
62.5°	763.2	766.9	768.7	752.3	779.0
65°	655.2	646.5	671.9	646.2	650.5
67.5°	555.8	560.2	557.7	541.6	547.8
70°	454.9	460.5	456.5	438.2	443.8
72.5°	362.7	355.9	360.2	337.3	347.9
75°	272.7	267.1	272.0	252.8	261.5
77.5°	185.7	190.0	186.9	176.7	182.6
80°	122.6	119.1	119.1	113.3	114.5
82.5°	71.5	68.1	67.2	65.3	68.1
85°	33.4	32.5	33.1	32.2	30.9
87.5°	12.1	12.4	12.4	11.8	11.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)