

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: P589516

Luminaire Tested: **FMR-24-2-LD4-3STD-40-UNV-82-97-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P589516  
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-82-97-EDD  
Description: 2X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR  
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

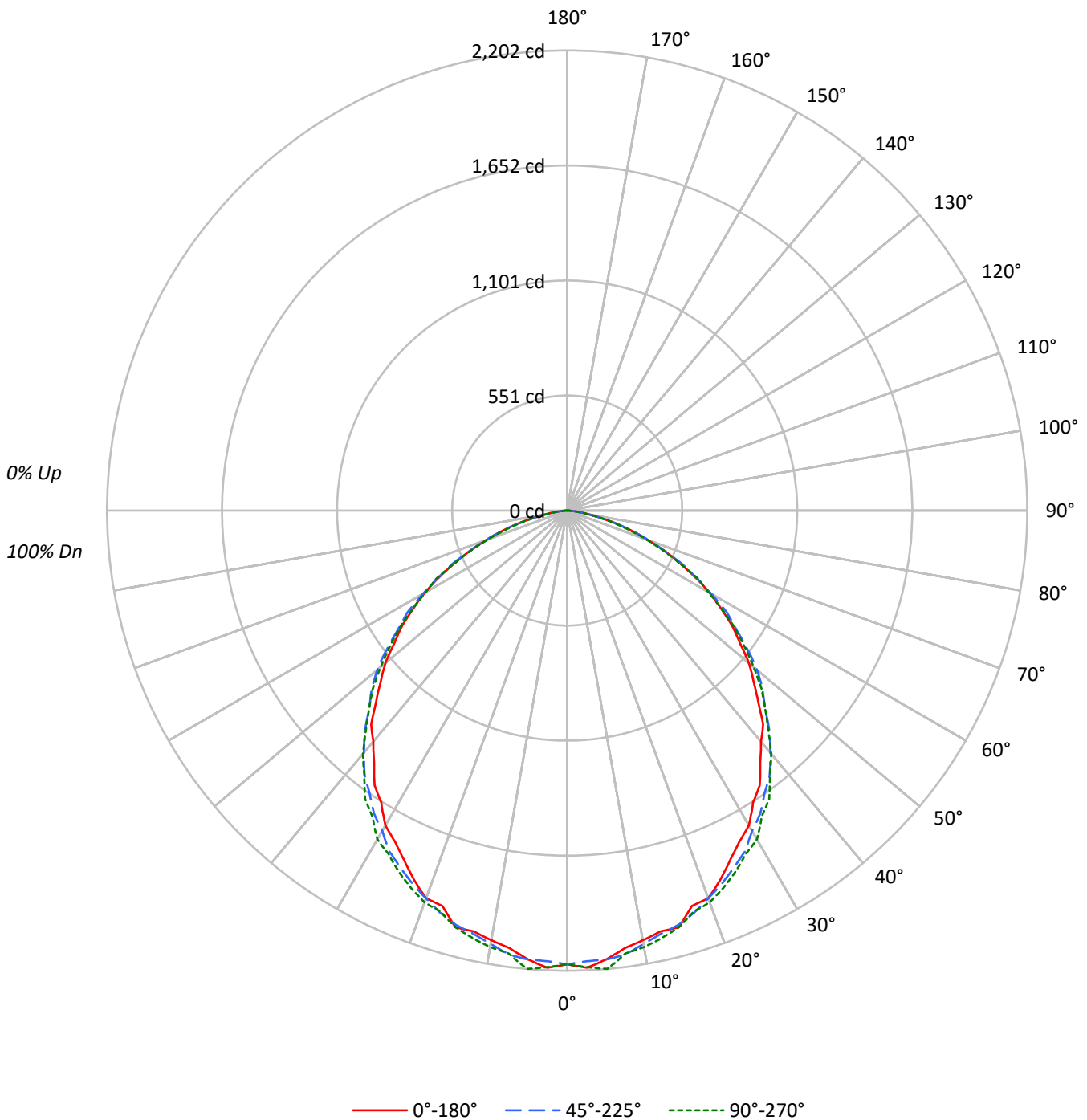
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5472.0 lumens  
Efficiency: N/A  
Efficacy: 109.4 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): 50  
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°	5843	5843	5843
5°	5823	5826	5948
10°	5705	5755	5796
15°	5750	5719	5751
20°	5653	5653	5713
25°	5479	5599	5661
30°	5404	5499	5645
35°	5277	5415	5536
40°	5071	5316	5339
45°	4918	5093	5101
50°	4757	4971	4876
55°	4532	4620	4587
60°	4238	4280	4203
65°	3779	3875	3752
70°	3242	3253	3163
75°	2568	2562	2463
80°	1720	1672	1607
85°	936	926	865



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	204.2	3.7
10°-20°	578.8	10.6
20°-30°	867.2	15.8
30°-40°	1027.8	18.8
40°-50°	1029.7	18.8
50°-60°	874.0	16.0
60°-70°	589.3	10.8
70°-80°	258.9	4.7
80°-90°	42.1	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°	1650.2	30.2
0°-40°	2678.0	48.9
0°-60°	4581.7	83.7
0°-90°	5472.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5472.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2171	2171	2171	2171	2171	
5°	2156	2151	2157	2150	2202	203
15°	2064	2040	2053	2064	2064	575
25°	1845	1856	1886	1910	1906	853
35°	1606	1611	1648	1686	1685	997
45°	1292	1316	1338	1373	1340	1000
55°	966	960	985	978	978	859
65°	594	586	609	585	589	590
75°	247	242	246	229	237	265
85°	30	29	30	29	28	44
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2171.2	2171.2	2171.2	2171.2	2171.2
2.5°	2189.9	2173.4	2158.0	2175.9	2186.8
5°	2155.7	2150.7	2156.6	2150.1	2202.0
7.5°	2111.4	2130.8	2142.0	2135.0	2138.1
10°	2087.9	2081.2	2106.1	2123.5	2121.0
12.5°	2062.7	2072.8	2074.2	2092.9	2094.6
15°	2064.1	2040.2	2052.9	2063.5	2064.3
17.5°	1983.9	2009.7	2018.4	2042.8	2012.5
20°	1974.1	1955.3	1974.1	1999.0	1995.1
22.5°	1913.8	1892.8	1933.2	1955.3	1953.9
25°	1845.4	1855.5	1885.8	1910.4	1906.5
27.5°	1785.4	1797.2	1840.4	1874.3	1852.4
30°	1739.2	1733.3	1769.7	1800.0	1816.8
32.5°	1656.5	1677.8	1720.4	1750.4	1734.4
35°	1606.3	1611.1	1648.3	1686.5	1685.3
37.5°	1518.5	1540.7	1593.1	1603.8	1594.0
40°	1443.7	1465.8	1513.2	1524.7	1519.9
42.5°	1388.5	1392.4	1433.0	1446.2	1425.2
45°	1292.3	1316.4	1338.3	1372.8	1340.3
47.5°	1210.5	1221.7	1268.8	1278.0	1260.9
50°	1136.2	1140.1	1187.5	1176.0	1164.8
52.5°	1042.8	1059.4	1086.0	1083.8	1070.6
55°	966.0	959.6	984.8	978.1	977.8
57.5°	873.8	885.0	905.7	895.1	878.0
60°	787.4	787.7	795.3	783.2	781.0
62.5°	691.3	694.7	696.3	681.5	705.6
65°	593.5	585.6	608.6	585.3	589.3
67.5°	503.5	507.4	505.2	490.6	496.2
70°	412.1	417.1	413.5	396.9	402.0
72.5°	328.5	322.4	326.3	305.6	315.1
75°	247.0	241.9	246.4	229.0	236.9
77.5°	168.2	172.1	169.3	160.1	165.4
80°	111.0	107.9	107.9	102.6	103.7
82.5°	64.8	61.7	60.8	59.1	61.7
85°	30.3	29.4	30.0	29.2	28.0
87.5°	10.9	11.2	11.2	10.7	10.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)