

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: P589484

Luminaire Tested: **FMR-24-2-LD4-3STD-35-UNV-82-97-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P589484  
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-35-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 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

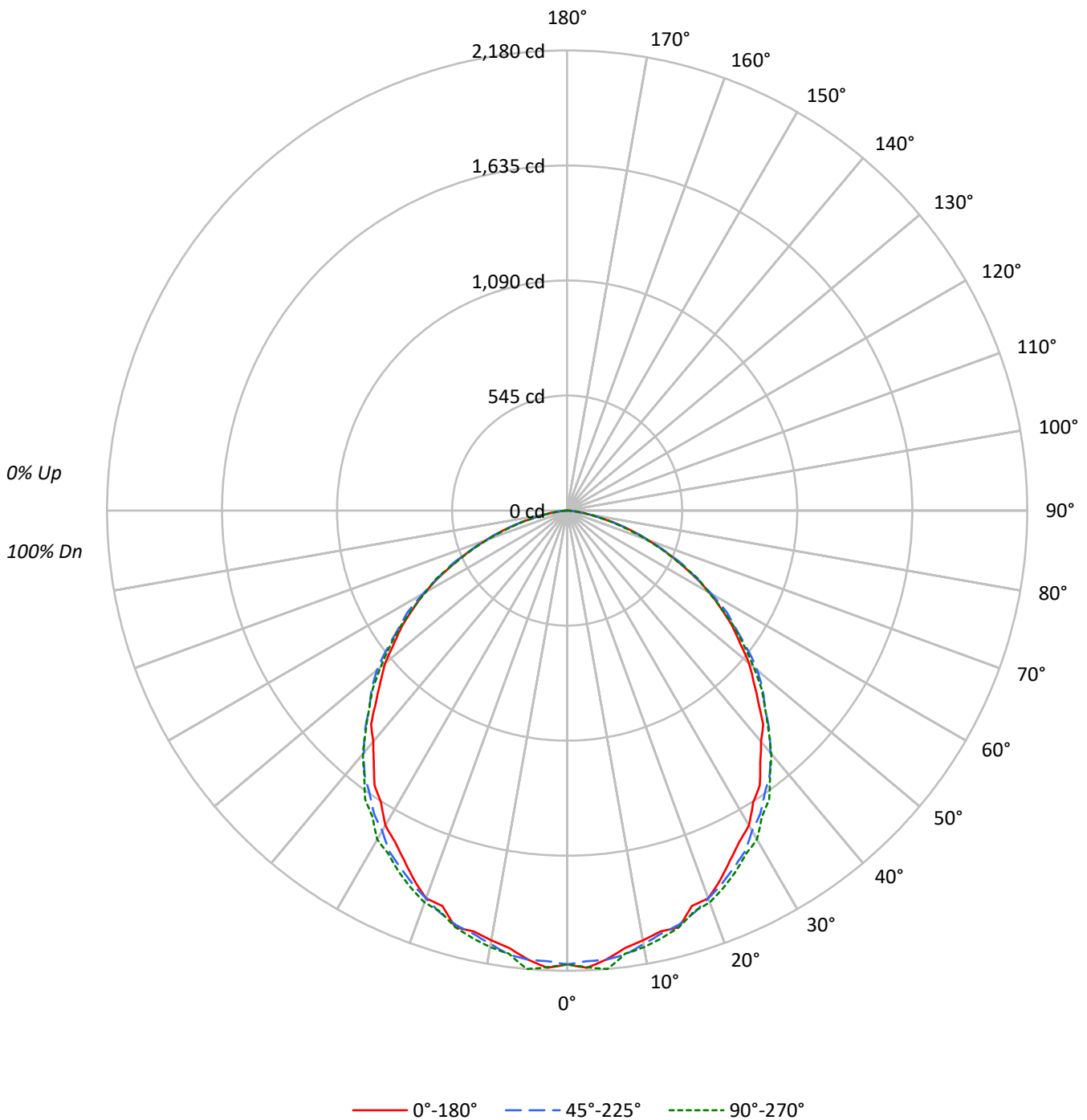
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5418.0 lumens  
Efficiency: N/A  
Efficacy: 108.4 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°	5785	5785	5785
5°	5766	5768	5890
10°	5649	5698	5738
15°	5694	5663	5694
20°	5597	5597	5657
25°	5425	5544	5605
30°	5351	5445	5590
35°	5225	5362	5482
40°	5021	5263	5286
45°	4870	5043	5050
50°	4710	4922	4828
55°	4487	4575	4542
60°	4196	4238	4162
65°	3741	3837	3715
70°	3210	3221	3131
75°	2542	2537	2438
80°	1703	1657	1592
85°	926	917	858



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	202.2	3.7
10°-20°	573.1	10.6
20°-30°	858.6	15.8
30°-40°	1017.6	18.8
40°-50°	1019.5	18.8
50°-60°	865.4	16.0
60°-70°	583.5	10.8
70°-80°	256.4	4.7
80°-90°	41.7	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°	1633.9	30.2
0°-40°	2651.6	48.9
0°-60°	4536.5	83.7
0°-90°	5418.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5418.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2150	2150	2150	2150	2150	
5°	2134	2130	2135	2129	2180	201
15°	2044	2020	2033	2043	2044	569
25°	1827	1837	1867	1892	1888	845
35°	1590	1595	1632	1670	1669	987
45°	1280	1303	1325	1359	1327	990
55°	956	950	975	968	968	851
65°	588	580	603	580	583	584
75°	244	240	244	227	234	262
85°	30	29	30	29	28	43
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2149.7	2149.7	2149.7	2149.7	2149.7
2.5°	2168.3	2151.9	2136.7	2154.4	2165.3
5°	2134.5	2129.5	2135.3	2128.9	2180.3
7.5°	2090.6	2109.8	2120.9	2113.9	2117.0
10°	2067.3	2060.6	2085.3	2102.5	2100.0
12.5°	2042.3	2052.3	2053.7	2072.3	2074.0
15°	2043.7	2020.1	2032.6	2043.1	2044.0
17.5°	1964.3	1989.8	1998.5	2022.6	1992.6
20°	1954.6	1936.0	1954.6	1979.3	1975.4
22.5°	1894.9	1874.1	1914.1	1936.0	1934.6
25°	1827.2	1837.2	1867.2	1891.6	1887.7
27.5°	1767.8	1779.5	1822.2	1855.8	1834.1
30°	1722.0	1716.2	1752.3	1782.2	1798.9
32.5°	1640.1	1661.2	1703.4	1733.1	1717.3
35°	1590.4	1595.2	1632.1	1669.8	1668.7
37.5°	1503.6	1525.5	1577.4	1587.9	1578.2
40°	1429.4	1451.4	1498.3	1509.7	1504.9
42.5°	1374.8	1378.7	1418.9	1431.9	1411.1
45°	1279.6	1303.4	1325.1	1359.2	1327.0
47.5°	1198.5	1209.6	1256.3	1265.4	1248.5
50°	1125.0	1128.8	1175.8	1164.4	1153.3
52.5°	1032.5	1048.9	1075.3	1073.1	1060.0
55°	956.5	950.1	975.1	968.4	968.1
57.5°	865.2	876.3	896.8	886.3	869.3
60°	779.7	780.0	787.4	775.5	773.3
62.5°	684.5	687.8	689.5	674.8	698.6
65°	587.6	579.8	602.6	579.6	583.4
67.5°	498.5	502.4	500.2	485.7	491.3
70°	408.0	413.0	409.4	393.0	398.0
72.5°	325.3	319.2	323.1	302.5	312.0
75°	244.5	239.5	244.0	226.8	234.5
77.5°	166.5	170.4	167.6	158.5	163.8
80°	109.9	106.9	106.9	101.6	102.7
82.5°	64.1	61.1	60.2	58.6	61.1
85°	30.0	29.1	29.7	28.9	27.8
87.5°	10.8	11.1	11.1	10.5	10.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)