

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: P589353

Luminaire Tested: **FMR-24-2-LD4-3HI-50-UNV-82-88-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P589353  
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-LD4-3HI-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: -

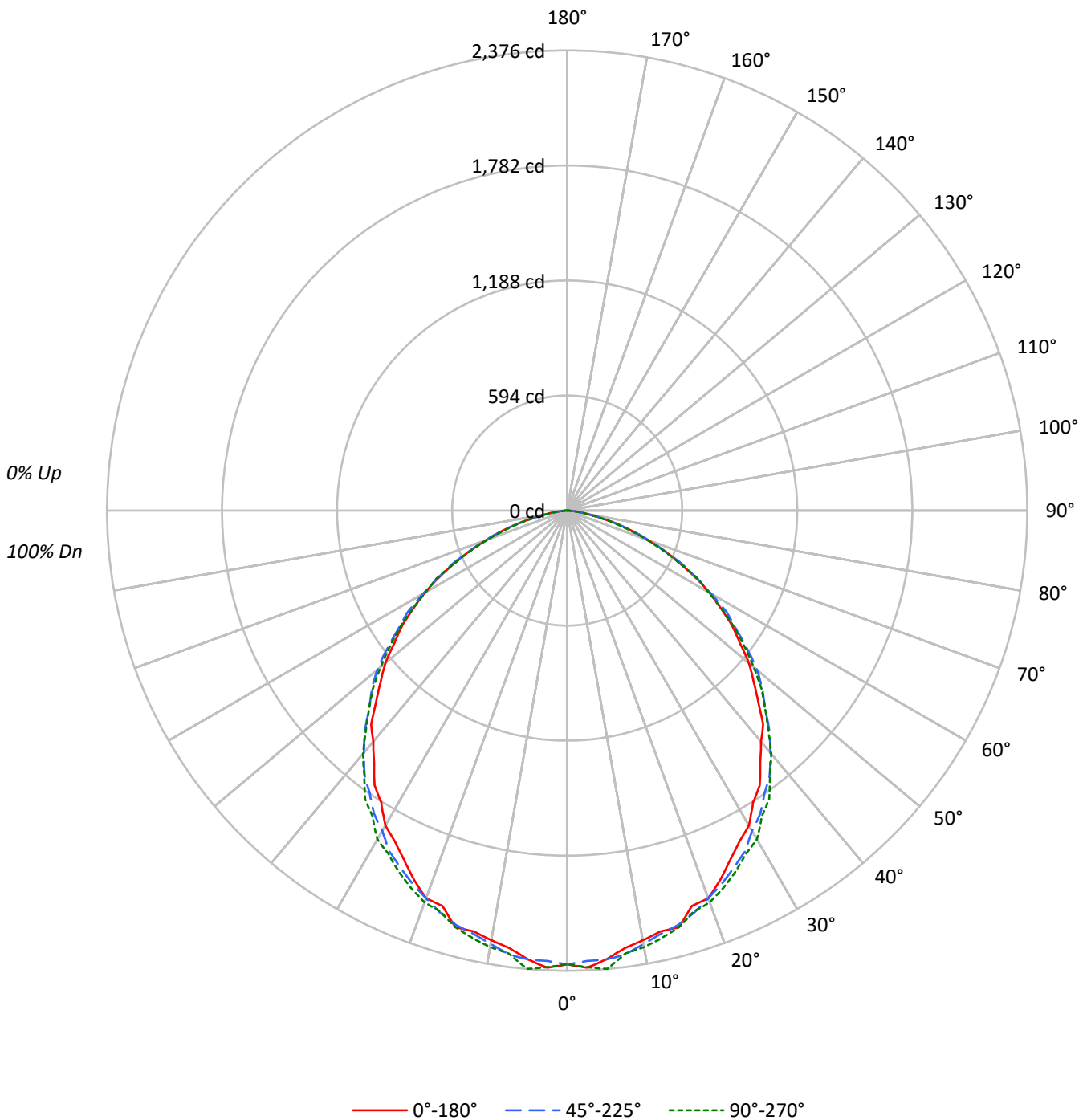
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5904.0 lumens  
Efficiency: N/A  
Efficacy: 91.1 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): 64.8  
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°	6304	6304	6304
5°	6283	6285	6418
10°	6155	6209	6253
15°	6204	6171	6205
20°	6099	6099	6164
25°	5912	6041	6108
30°	5831	5933	6091
35°	5693	5843	5974
40°	5472	5735	5761
45°	5306	5495	5503
50°	5132	5364	5261
55°	4890	4985	4950
60°	4573	4618	4535
65°	4077	4181	4048
70°	3498	3510	3412
75°	2771	2765	2658
80°	1857	1804	1734
85°	1010	1000	932



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	220.4	3.7
10°-20°	624.5	10.6
20°-30°	935.7	15.8
30°-40°	1108.9	18.8
40°-50°	1111.0	18.8
50°-60°	943.0	16.0
60°-70°	635.8	10.8
70°-80°	279.4	4.7
80°-90°	45.4	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°	1780.5	30.2
0°-40°	2889.4	48.9
0°-60°	4943.4	83.7
0°-90°	5904.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5904.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2343	2343	2343	2343	2343	
5°	2326	2320	2327	2320	2376	219
15°	2227	2201	2215	2226	2227	620
25°	1991	2002	2035	2061	2057	921
35°	1733	1738	1778	1820	1818	1076
45°	1394	1420	1444	1481	1446	1079
55°	1042	1035	1062	1055	1055	927
65°	640	632	657	632	636	637
75°	266	261	266	247	256	286
85°	33	32	32	32	30	47
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2342.6	2342.6	2342.6	2342.6	2342.6
2.5°	2362.8	2345.0	2328.3	2347.7	2359.5
5°	2325.9	2320.5	2326.8	2319.9	2375.8
7.5°	2278.1	2299.0	2311.1	2303.5	2306.9
10°	2252.7	2245.5	2272.4	2291.1	2288.4
12.5°	2225.5	2236.4	2237.9	2258.2	2260.0
15°	2227.0	2201.3	2214.9	2226.4	2227.3
17.5°	2140.5	2168.3	2177.7	2204.0	2171.4
20°	2129.9	2109.7	2129.9	2156.8	2152.6
22.5°	2064.9	2042.2	2085.8	2109.7	2108.2
25°	1991.1	2002.0	2034.7	2061.3	2057.0
27.5°	1926.4	1939.1	1985.7	2022.3	1998.7
30°	1876.5	1870.1	1909.4	1942.1	1960.2
32.5°	1787.2	1810.2	1856.2	1888.6	1871.3
35°	1733.1	1738.2	1778.5	1819.6	1818.4
37.5°	1638.4	1662.3	1718.9	1730.4	1719.8
40°	1557.7	1581.6	1632.7	1645.1	1639.9
42.5°	1498.1	1502.3	1546.2	1560.4	1537.7
45°	1394.3	1420.4	1443.9	1481.2	1446.1
47.5°	1306.0	1318.1	1368.9	1378.9	1360.5
50°	1225.9	1230.1	1281.2	1268.8	1256.7
52.5°	1125.2	1143.0	1171.7	1169.3	1155.1
55°	1042.3	1035.3	1062.5	1055.3	1055.0
57.5°	942.8	954.9	977.3	965.8	947.3
60°	849.6	849.9	858.1	845.1	842.7
62.5°	745.9	749.5	751.3	735.3	761.3
65°	640.3	631.8	656.6	631.5	635.8
67.5°	543.2	547.5	545.0	529.3	535.4
70°	444.6	450.1	446.1	428.3	433.7
72.5°	354.5	347.8	352.1	329.7	340.0
75°	266.5	261.0	265.9	247.1	255.6
77.5°	181.5	185.7	182.7	172.7	178.5
80°	119.8	116.4	116.4	110.7	111.9
82.5°	69.9	66.5	65.6	63.8	66.5
85°	32.7	31.8	32.4	31.5	30.2
87.5°	11.8	12.1	12.1	11.5	10.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)