

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: P589511

Luminaire Tested: **FMR-24-2-LD4-3STD-40-UNV-82-86-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589511
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-82-86-EDD
Description: 2X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

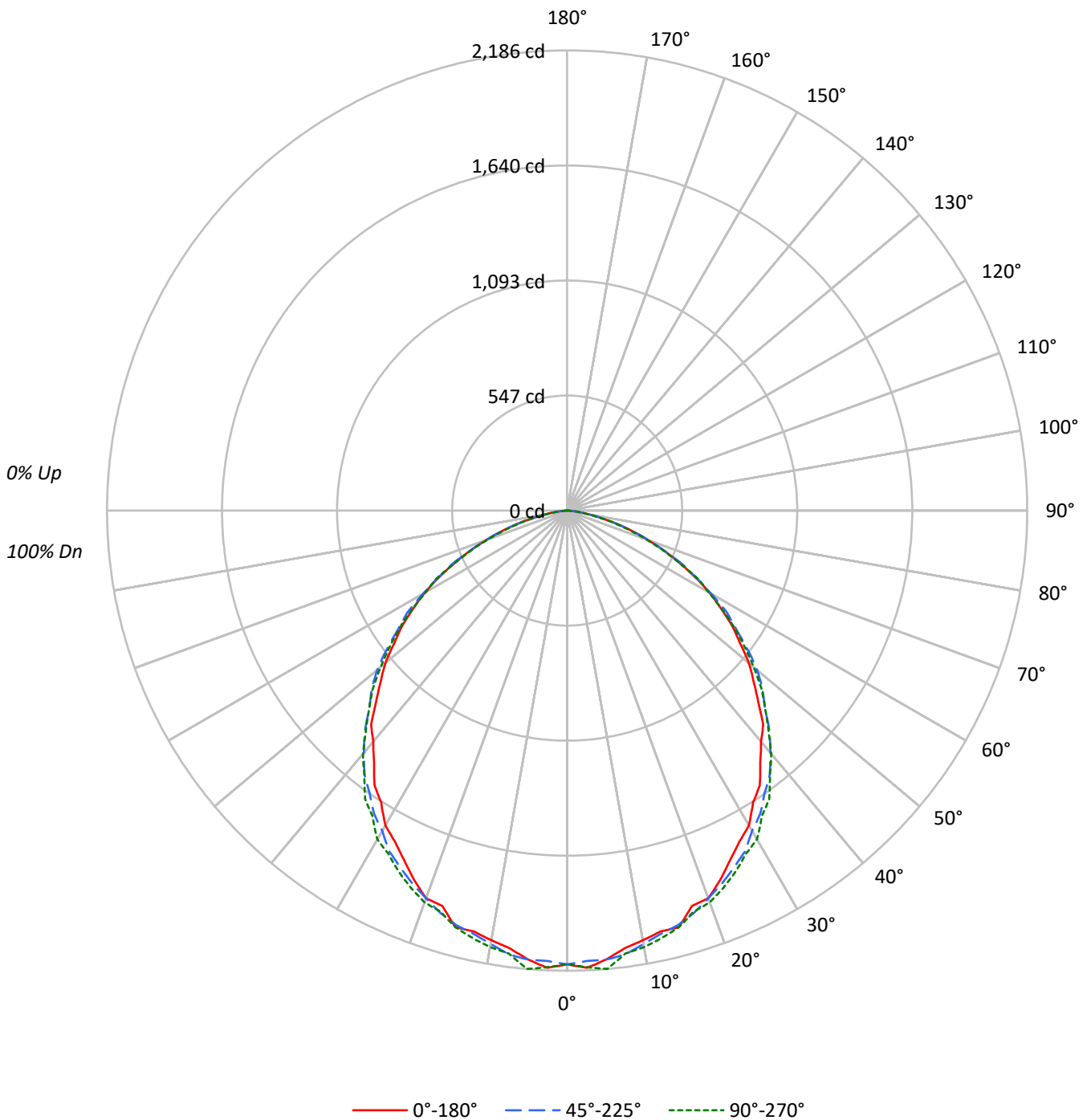
Lumens per Lamp: N/A
Luminaire Lumens: 5432.0 lumens
Efficiency: N/A
Efficacy: 108.6 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 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	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					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°	5800	5800	5800
5°	5781	5783	5905
10°	5663	5713	5753
15°	5708	5677	5709
20°	5612	5612	5672
25°	5439	5558	5619
30°	5365	5459	5604
35°	5238	5375	5496
40°	5034	5277	5300
45°	4882	5056	5063
50°	4722	4935	4841
55°	4499	4586	4554
60°	4207	4249	4173
65°	3751	3847	3724
70°	3219	3230	3140
75°	2549	2543	2444
80°	1708	1660	1596
85°	929	920	858



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	202.7	3.7
10°-20°	574.6	10.6
20°-30°	860.8	15.8
30°-40°	1020.3	18.8
40°-50°	1022.2	18.8
50°-60°	867.6	16.0
60°-70°	585.0	10.8
70°-80°	257.0	4.7
80°-90°	41.8	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°	1638.2	30.2
0°-40°	2658.4	48.9
0°-60°	4548.2	83.7
0°-90°	5432.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5432.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2155	2155	2155	2155	2155	
5°	2140	2135	2141	2134	2186	202
15°	2049	2025	2038	2048	2049	571
25°	1832	1842	1872	1896	1893	847
35°	1594	1599	1636	1674	1673	990
45°	1283	1307	1328	1363	1330	992
55°	959	953	978	971	971	853
65°	589	581	604	581	585	586
75°	245	240	245	227	235	263
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°	2155.3	2155.3	2155.3	2155.3	2155.3
2.5°	2173.9	2157.5	2142.2	2160.0	2170.9
5°	2140.0	2135.0	2140.8	2134.4	2185.9
7.5°	2096.0	2115.2	2126.3	2119.4	2122.4
10°	2072.6	2066.0	2090.7	2108.0	2105.5
12.5°	2047.6	2057.6	2059.0	2077.6	2079.3
15°	2049.0	2025.3	2037.8	2048.4	2049.3
17.5°	1969.4	1995.0	2003.6	2027.8	1997.8
20°	1959.6	1941.0	1959.6	1984.4	1980.5
22.5°	1899.8	1878.9	1919.0	1941.0	1939.6
25°	1831.9	1841.9	1872.0	1896.5	1892.6
27.5°	1772.4	1784.1	1826.9	1860.6	1838.9
30°	1726.5	1720.6	1756.8	1786.8	1803.5
32.5°	1644.4	1665.5	1707.8	1737.6	1721.7
35°	1594.5	1599.3	1636.3	1674.1	1673.0
37.5°	1507.4	1529.4	1581.5	1592.0	1582.3
40°	1433.1	1455.1	1502.2	1513.6	1508.8
42.5°	1378.3	1382.2	1422.6	1435.6	1414.8
45°	1282.9	1306.8	1328.5	1362.7	1330.5
47.5°	1201.6	1212.7	1259.5	1268.7	1251.7
50°	1127.9	1131.8	1178.8	1167.4	1156.3
52.5°	1035.2	1051.6	1078.1	1075.8	1062.8
55°	959.0	952.6	977.6	970.9	970.6
57.5°	867.4	878.5	899.1	888.5	871.6
60°	781.7	782.0	789.5	777.5	775.3
62.5°	686.2	689.6	691.2	676.5	700.4
65°	589.1	581.3	604.1	581.0	584.9
67.5°	499.8	503.7	501.5	487.0	492.6
70°	409.1	414.1	410.5	394.0	399.1
72.5°	326.1	320.0	323.9	303.3	312.8
75°	245.2	240.2	244.6	227.4	235.1
77.5°	167.0	170.9	168.1	158.9	164.2
80°	110.2	107.1	107.1	101.9	103.0
82.5°	64.3	61.2	60.4	58.7	61.2
85°	30.1	29.2	29.8	28.9	27.8
87.5°	10.9	11.1	11.1	10.6	10.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)