

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: P589515

Luminaire Tested: **FMR-24-2-LD4-3STD-40-UNV-82-96-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589515
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-82-96-EDD
Description: 2X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

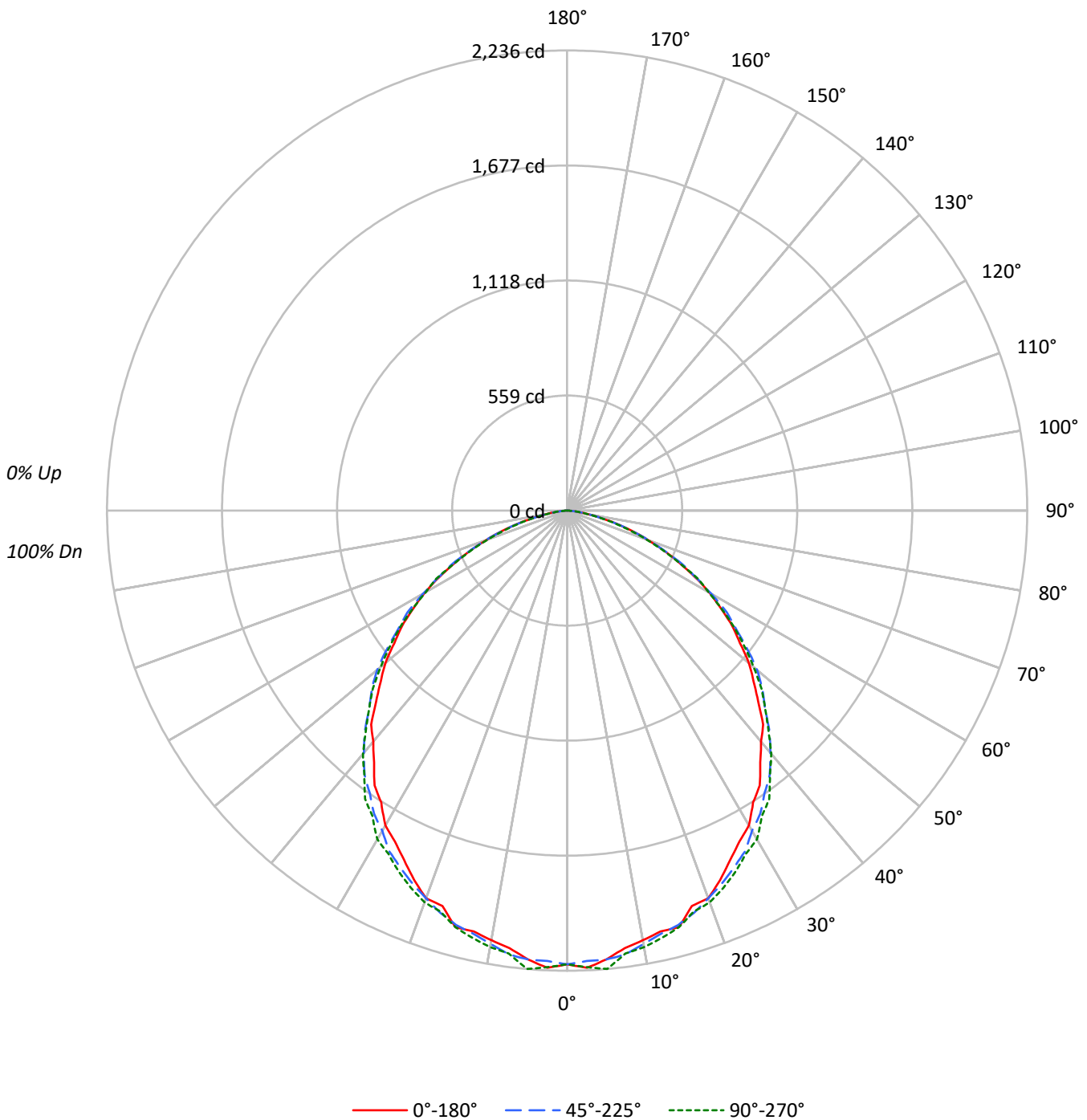
Lumens per Lamp: N/A
Luminaire Lumens: 5556.0 lumens
Efficiency: N/A
Efficacy: 111.1 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 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°	5932	5932	5932
5°	5913	5915	6039
10°	5793	5843	5884
15°	5839	5807	5839
20°	5740	5740	5801
25°	5563	5685	5748
30°	5487	5583	5732
35°	5358	5498	5621
40°	5149	5397	5421
45°	4994	5171	5179
50°	4829	5048	4951
55°	4601	4691	4658
60°	4303	4346	4268
65°	3837	3934	3810
70°	3292	3303	3212
75°	2608	2601	2501
80°	1746	1698	1632
85°	948	942	880



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	207.4	3.7
10°-20°	587.7	10.6
20°-30°	880.5	15.8
30°-40°	1043.6	18.8
40°-50°	1045.5	18.8
50°-60°	887.4	16.0
60°-70°	598.3	10.8
70°-80°	262.9	4.7
80°-90°	42.7	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°	1675.6	30.2
0°-40°	2719.1	48.9
0°-60°	4652.0	83.7
0°-90°	5556.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5556.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2204	2204	2204	2204	2204	
5°	2189	2184	2190	2183	2236	206
15°	2096	2072	2084	2095	2096	584
25°	1874	1884	1915	1940	1936	866
35°	1631	1636	1674	1712	1711	1013
45°	1312	1337	1359	1394	1361	1015
55°	981	974	1000	993	993	872
65°	603	595	618	594	598	599
75°	251	246	250	232	240	269
85°	31	30	30	30	28	45
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2204.5	2204.5	2204.5	2204.5	2204.5
2.5°	2223.6	2206.8	2191.1	2209.3	2220.4
5°	2188.8	2183.7	2189.7	2183.1	2235.8
7.5°	2143.9	2163.5	2174.9	2167.8	2170.9
10°	2119.9	2113.1	2138.4	2156.1	2153.5
12.5°	2094.3	2104.6	2106.0	2125.1	2126.8
15°	2095.8	2071.6	2084.4	2095.2	2096.0
17.5°	2014.3	2040.5	2049.4	2074.1	2043.4
20°	2004.4	1985.3	2004.4	2029.7	2025.7
22.5°	1943.2	1921.8	1962.8	1985.3	1983.9
25°	1873.7	1884.0	1914.7	1939.8	1935.8
27.5°	1812.8	1824.8	1868.6	1903.1	1880.9
30°	1765.9	1759.9	1796.9	1827.6	1844.7
32.5°	1681.9	1703.5	1746.8	1777.2	1761.0
35°	1630.9	1635.8	1673.6	1712.4	1711.2
37.5°	1541.9	1564.3	1617.6	1628.4	1618.4
40°	1465.9	1488.3	1536.4	1548.1	1543.3
42.5°	1409.8	1413.8	1455.0	1468.4	1447.1
45°	1312.2	1336.6	1358.8	1393.8	1360.8
47.5°	1229.0	1240.4	1288.2	1297.6	1280.3
50°	1153.6	1157.6	1205.7	1194.0	1182.6
52.5°	1058.8	1075.6	1102.7	1100.4	1087.0
55°	980.8	974.3	999.9	993.1	992.8
57.5°	887.2	898.6	919.6	908.8	891.5
60°	799.5	799.8	807.5	795.3	793.0
62.5°	701.9	705.3	707.0	691.9	716.4
65°	602.6	594.6	617.9	594.3	598.3
67.5°	511.2	515.2	512.9	498.1	503.8
70°	418.4	423.5	419.8	403.0	408.2
72.5°	333.6	327.3	331.3	310.2	319.9
75°	250.8	245.6	250.2	232.5	240.5
77.5°	170.8	174.8	171.9	162.5	167.9
80°	112.7	109.6	109.6	104.2	105.3
82.5°	65.8	62.6	61.8	60.1	62.6
85°	30.7	29.9	30.5	29.6	28.5
87.5°	11.1	11.4	11.4	10.8	10.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)