

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: P589497

Luminaire Tested: **FMR-24-2-LD4-3STD-40-UNV-80-88-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589497
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-80-88-EDD
Description: 2X2 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

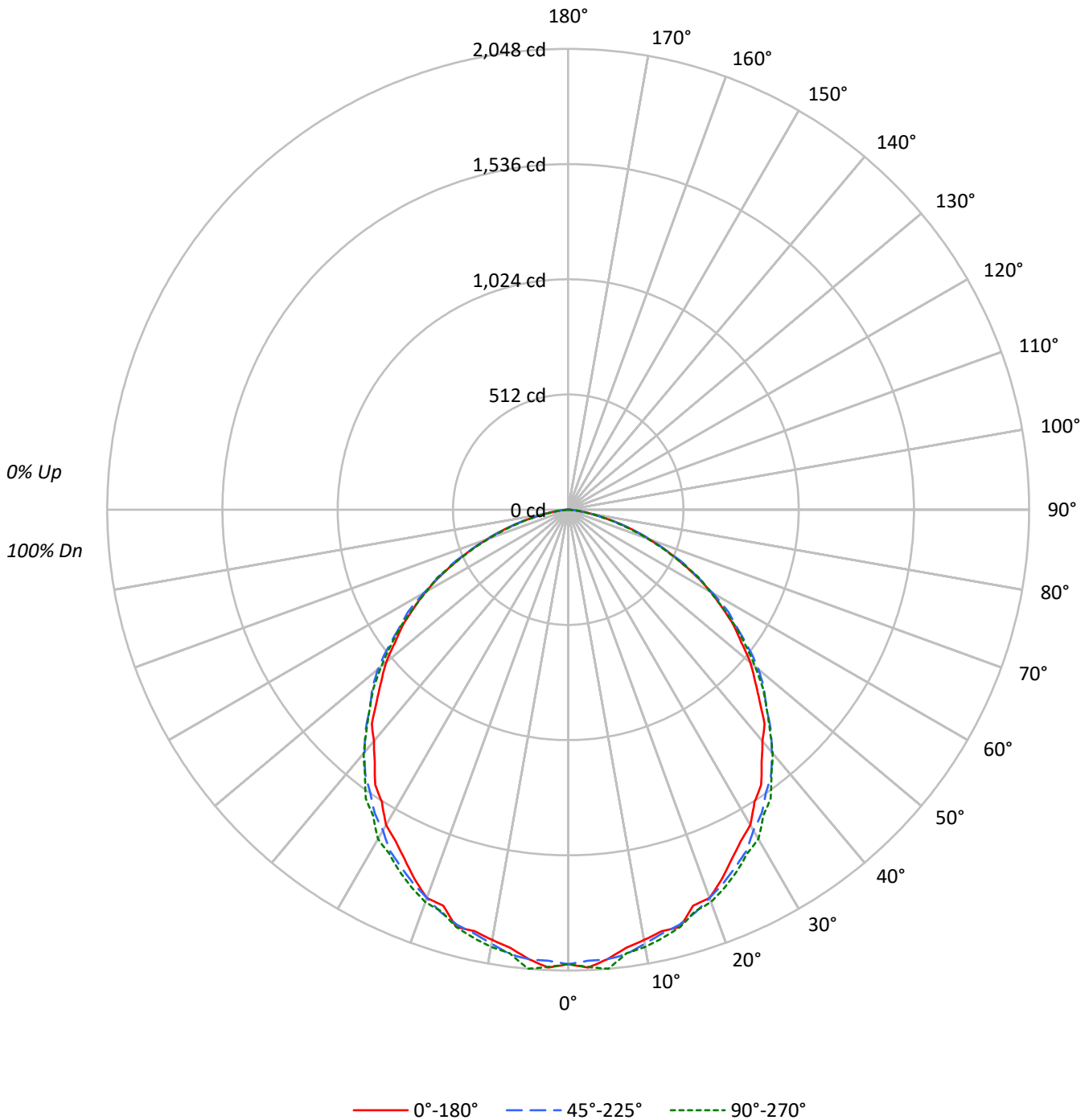
Lumens per Lamp: N/A
Luminaire Lumens: 5089.0 lumens
Efficiency: N/A
Efficacy: 101.8 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P589497

CATALOG NUMBER: FMR-24-2-LD4-3STD-40-UNV-80-88-EDD

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°	5434	5434	5434
5°	5415	5418	5532
10°	5306	5352	5390
15°	5348	5319	5349
20°	5257	5257	5314
25°	5096	5207	5265
30°	5026	5114	5250
35°	4908	5036	5149
40°	4716	4944	4966
45°	4574	4736	4743
50°	4424	4623	4535
55°	4215	4297	4267
60°	3941	3980	3909
65°	3514	3604	3489
70°	3015	3025	2942
75°	2388	2383	2290
80°	1599	1556	1495
85°	871	861	806



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	189.9	3.7
10°-20°	538.3	10.6
20°-30°	806.5	15.8
30°-40°	955.9	18.8
40°-50°	957.6	18.8
50°-60°	812.9	16.0
60°-70°	548.0	10.8
70°-80°	240.8	4.7
80°-90°	39.1	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°	1534.7	30.2
0°-40°	2490.6	48.9
0°-60°	4261.0	83.7
0°-90°	5089.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5089.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2019	2019	2019	2019	2019	
5°	2005	2000	2006	2000	2048	189
15°	1920	1897	1909	1919	1920	535
25°	1716	1726	1754	1777	1773	793
35°	1494	1498	1533	1568	1567	928
45°	1202	1224	1245	1277	1246	930
55°	898	892	916	910	909	799
65°	552	545	566	544	548	549
75°	230	225	229	213	220	246
85°	28	27	28	27	26	41
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2019.2	2019.2	2019.2	2019.2	2019.2
2.5°	2036.7	2021.3	2006.9	2023.6	2033.8
5°	2004.8	2000.2	2005.6	1999.6	2047.9
7.5°	1963.7	1981.6	1992.1	1985.6	1988.4
10°	1941.8	1935.5	1958.7	1974.9	1972.5
12.5°	1918.3	1927.7	1929.0	1946.4	1948.0
15°	1919.6	1897.4	1909.2	1919.1	1919.9
17.5°	1845.0	1869.0	1877.1	1899.8	1871.6
20°	1835.9	1818.4	1835.9	1859.1	1855.5
22.5°	1779.9	1760.3	1797.8	1818.4	1817.1
25°	1716.2	1725.6	1753.8	1776.7	1773.1
27.5°	1660.5	1671.4	1711.6	1743.1	1722.8
30°	1617.4	1612.0	1645.9	1674.0	1689.7
32.5°	1540.5	1560.3	1600.0	1627.9	1613.0
35°	1493.9	1498.3	1533.0	1568.4	1567.4
37.5°	1412.3	1432.9	1481.6	1491.5	1482.4
40°	1342.6	1363.2	1407.3	1418.0	1413.6
42.5°	1291.3	1294.9	1332.7	1345.0	1325.4
45°	1201.9	1224.3	1244.6	1276.7	1246.4
47.5°	1125.7	1136.2	1180.0	1188.6	1172.7
50°	1056.7	1060.3	1104.4	1093.7	1083.2
52.5°	969.8	985.2	1010.0	1007.9	995.6
55°	898.4	892.4	915.9	909.6	909.4
57.5°	812.6	823.1	842.3	832.4	816.5
60°	732.3	732.6	739.6	728.4	726.3
62.5°	642.9	646.0	647.6	633.8	656.2
65°	551.9	544.6	566.0	544.4	548.0
67.5°	468.2	471.9	469.8	456.2	461.5
70°	383.2	387.9	384.5	369.2	373.9
72.5°	305.6	299.8	303.5	284.2	293.0
75°	229.7	225.0	229.2	213.0	220.3
77.5°	156.4	160.1	157.5	148.9	153.8
80°	103.2	100.4	100.4	95.4	96.5
82.5°	60.2	57.4	56.6	55.0	57.4
85°	28.2	27.4	27.9	27.1	26.1
87.5°	10.2	10.4	10.4	9.9	9.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)