

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: P589035

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

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589035
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-LD4-2HI-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

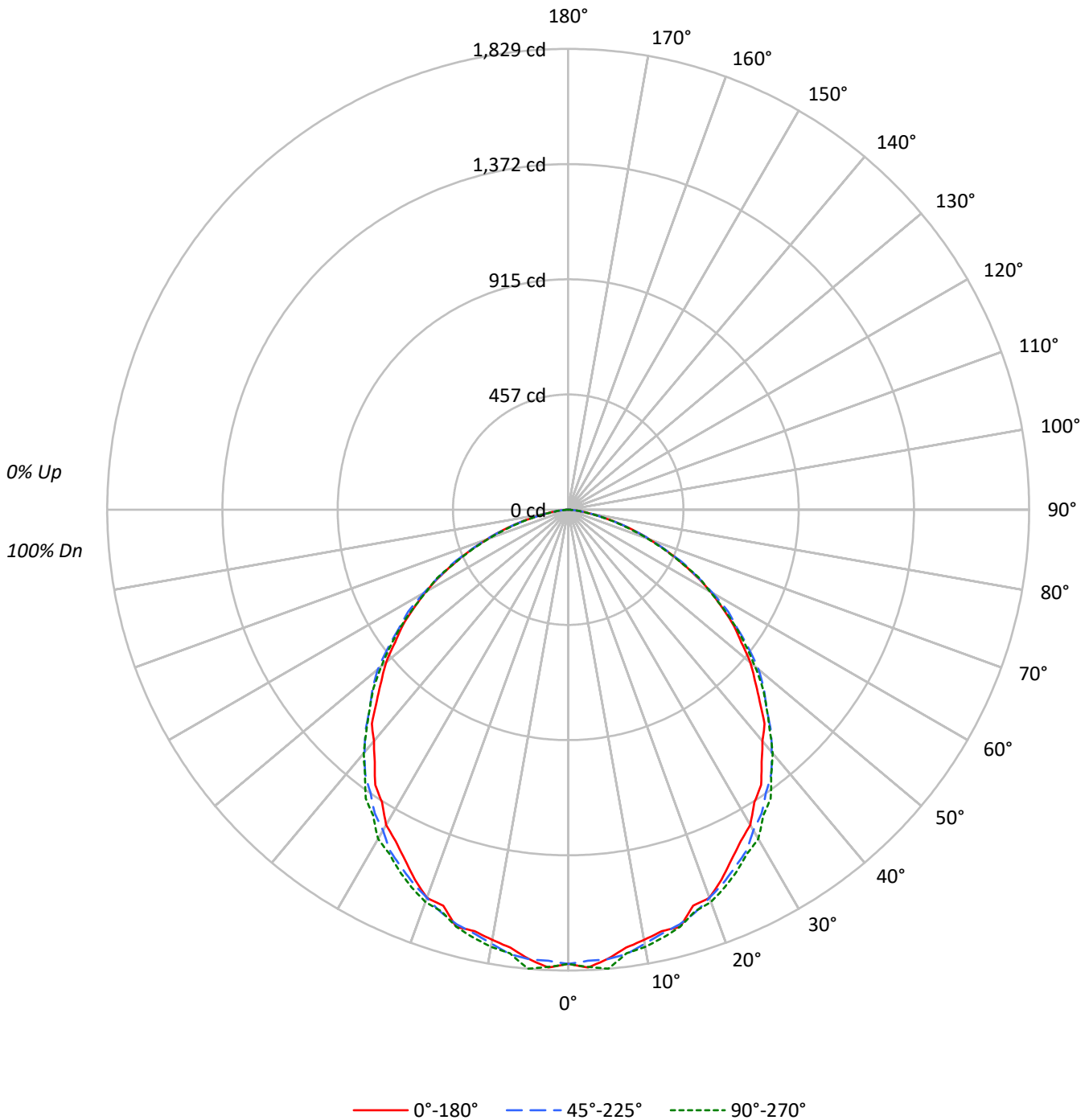
Lumens per Lamp: N/A
Luminaire Lumens: 4544.0 lumens
Efficiency: N/A
Efficacy: 105.2 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 43.2
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: P589035

CATALOG NUMBER: FMR-24-2-LD4-2HI-40-UNV-82-96-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°	4852	4852	4852
5°	4836	4837	4940
10°	4738	4779	4813
15°	4775	4749	4776
20°	4694	4694	4745
25°	4550	4650	4701
30°	4488	4566	4688
35°	4382	4497	4597
40°	4212	4414	4434
45°	4084	4229	4236
50°	3950	4128	4049
55°	3764	3837	3810
60°	3519	3554	3490
65°	3138	3218	3116
70°	2692	2702	2626
75°	2132	2127	2045
80°	1429	1389	1334
85°	775	769	719



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	169.6	3.7
10°-20°	480.7	10.6
20°-30°	720.1	15.8
30°-40°	853.5	18.8
40°-50°	855.1	18.8
50°-60°	725.8	16.0
60°-70°	489.3	10.8
70°-80°	215.0	4.7
80°-90°	34.9	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°	1370.4	30.2
0°-40°	2223.8	48.9
0°-60°	3804.7	83.7
0°-90°	4544.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4544.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1803	1803	1803	1803	1803	
5°	1790	1786	1791	1786	1829	169
15°	1714	1694	1705	1714	1714	478
25°	1532	1541	1566	1586	1583	708
35°	1334	1338	1369	1400	1400	828
45°	1073	1093	1111	1140	1113	830
55°	802	797	818	812	812	714
65°	493	486	505	486	489	490
75°	205	201	205	190	197	220
85°	25	24	25	24	23	36
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1802.9	1802.9	1802.9	1802.9	1802.9
2.5°	1818.5	1804.8	1792.0	1806.9	1816.0
5°	1790.1	1786.0	1790.8	1785.5	1828.6
7.5°	1753.4	1769.4	1778.7	1772.9	1775.5
10°	1733.8	1728.2	1748.9	1763.4	1761.3
12.5°	1712.9	1721.2	1722.4	1738.0	1739.4
15°	1714.0	1694.2	1704.7	1713.6	1714.3
17.5°	1647.4	1668.9	1676.1	1696.3	1671.2
20°	1639.3	1623.7	1639.3	1660.0	1656.8
22.5°	1589.2	1571.8	1605.3	1623.7	1622.5
25°	1532.4	1540.8	1566.0	1586.5	1583.2
27.5°	1482.6	1492.4	1528.3	1556.4	1538.3
30°	1444.2	1439.3	1469.6	1494.7	1508.7
32.5°	1375.5	1393.2	1428.6	1453.5	1440.3
35°	1333.9	1337.8	1368.8	1400.5	1399.5
37.5°	1261.0	1279.4	1322.9	1331.8	1323.6
40°	1198.9	1217.2	1256.6	1266.1	1262.2
42.5°	1153.0	1156.3	1190.0	1201.0	1183.5
45°	1073.2	1093.2	1111.3	1140.0	1113.0
47.5°	1005.2	1014.5	1053.6	1061.3	1047.1
50°	943.5	946.7	986.1	976.5	967.2
52.5°	866.0	879.7	901.8	900.0	889.0
55°	802.2	796.8	817.8	812.2	812.0
57.5°	725.6	734.9	752.1	743.3	729.1
60°	653.9	654.1	660.4	650.4	648.5
62.5°	574.1	576.8	578.2	565.9	585.9
65°	492.8	486.3	505.4	486.1	489.3
67.5°	418.1	421.3	419.5	407.4	412.0
70°	342.2	346.4	343.4	329.6	333.8
72.5°	272.8	267.7	271.0	253.7	261.7
75°	205.1	200.9	204.6	190.2	196.7
77.5°	139.7	142.9	140.6	132.9	137.3
80°	92.2	89.6	89.6	85.2	86.1
82.5°	53.8	51.2	50.5	49.1	51.2
85°	25.1	24.4	24.9	24.2	23.3
87.5°	9.1	9.3	9.3	8.8	8.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)