

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: P589481

Luminaire Tested: **FMR-24-2-LD4-3STD-35-UNV-82-88-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589481
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-35-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 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

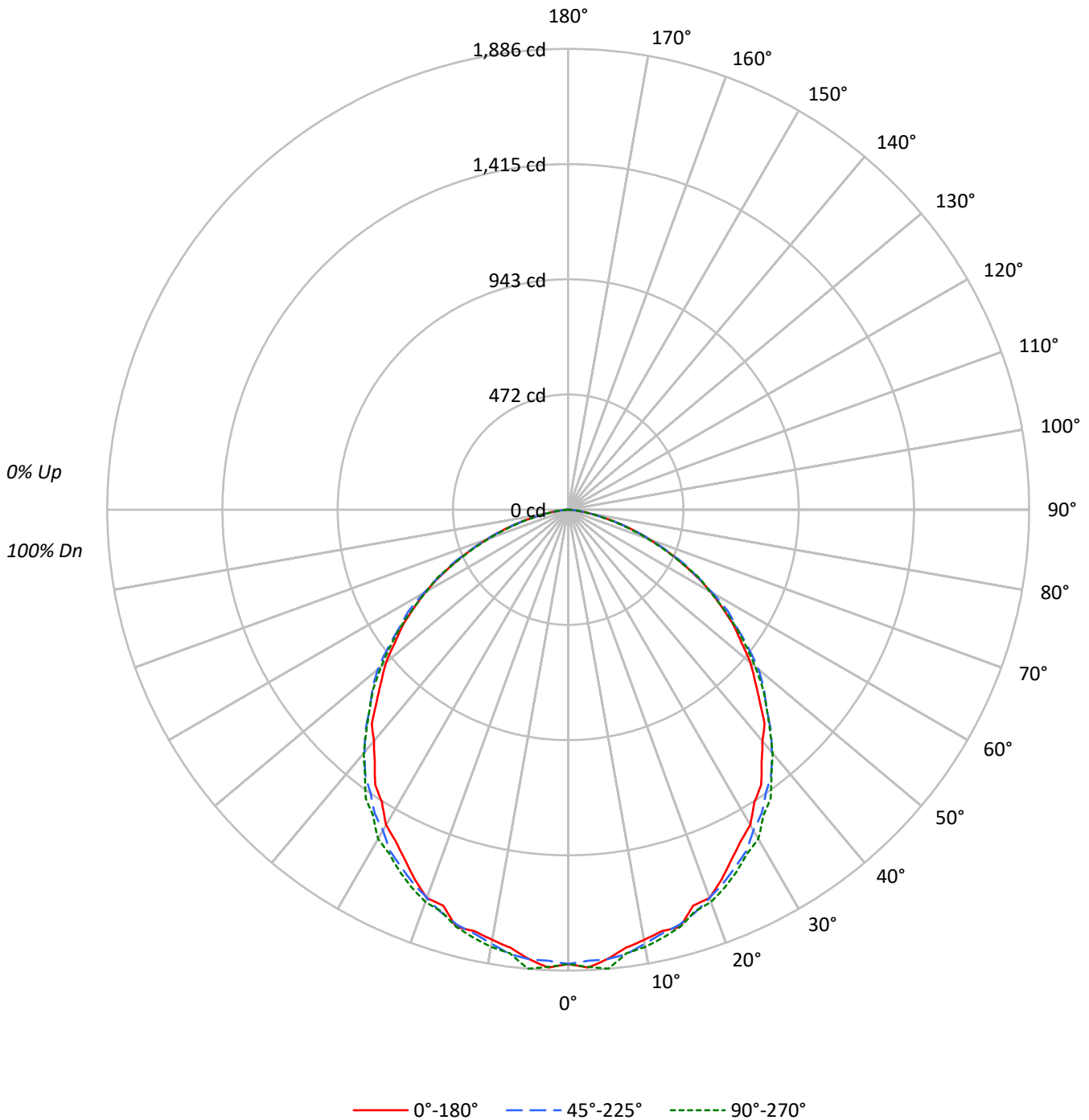
Lumens per Lamp: N/A
Luminaire Lumens: 4686.0 lumens
Efficiency: N/A
Efficacy: 93.7 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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: P589481

CATALOG NUMBER: FMR-24-2-LD4-3STD-35-UNV-82-88-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°	5003	5003	5003
5°	4987	4989	5094
10°	4886	4928	4963
15°	4924	4898	4925
20°	4841	4841	4893
25°	4692	4795	4848
30°	4628	4709	4834
35°	4519	4637	4741
40°	4343	4552	4572
45°	4212	4362	4368
50°	4073	4257	4176
55°	3881	3956	3928
60°	3629	3666	3599
65°	3236	3319	3213
70°	2777	2786	2709
75°	2199	2194	2110
80°	1474	1432	1376
85°	800	794	741



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	174.9	3.7
10°-20°	495.7	10.6
20°-30°	742.6	15.8
30°-40°	880.2	18.8
40°-50°	881.8	18.8
50°-60°	748.5	16.0
60°-70°	504.6	10.8
70°-80°	221.7	4.7
80°-90°	36.0	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°	1413.2	30.2
0°-40°	2293.3	48.9
0°-60°	3923.6	83.7
0°-90°	4686.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4686.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1859	1859	1859	1859	1859	
5°	1846	1842	1847	1841	1886	174
15°	1768	1747	1758	1767	1768	492
25°	1580	1589	1615	1636	1633	731
35°	1376	1380	1412	1444	1443	854
45°	1107	1127	1146	1176	1148	856
55°	827	822	843	838	837	736
65°	508	502	521	501	505	505
75°	212	207	211	196	203	227
85°	26	25	26	25	24	38
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1859.3	1859.3	1859.3	1859.3	1859.3
2.5°	1875.4	1861.2	1848.0	1863.4	1872.7
5°	1846.1	1841.8	1846.8	1841.3	1885.7
7.5°	1808.2	1824.7	1834.3	1828.3	1831.0
10°	1788.0	1782.2	1803.6	1818.5	1816.3
12.5°	1766.4	1775.0	1776.2	1792.3	1793.7
15°	1767.6	1747.2	1758.0	1767.1	1767.8
17.5°	1698.9	1721.0	1728.5	1749.3	1723.4
20°	1690.5	1674.4	1690.5	1711.9	1708.5
22.5°	1638.9	1620.9	1655.5	1674.4	1673.2
25°	1580.3	1589.0	1614.9	1636.0	1632.7
27.5°	1529.0	1539.0	1576.0	1605.1	1586.3
30°	1489.3	1484.3	1515.5	1541.4	1555.8
32.5°	1418.5	1436.8	1473.3	1499.0	1485.3
35°	1375.6	1379.6	1411.6	1444.2	1443.3
37.5°	1300.4	1319.4	1364.3	1373.4	1365.0
40°	1236.3	1255.3	1295.9	1305.7	1301.6
42.5°	1189.0	1192.4	1227.2	1238.5	1220.5
45°	1106.7	1127.3	1146.1	1175.6	1147.7
47.5°	1036.6	1046.2	1086.5	1094.4	1079.8
50°	973.0	976.3	1016.9	1007.1	997.5
52.5°	893.0	907.2	930.0	928.1	916.8
55°	827.3	821.7	843.3	837.6	837.3
57.5°	748.3	757.9	775.6	766.5	751.9
60°	674.3	674.6	681.1	670.7	668.8
62.5°	592.0	594.9	596.3	583.6	604.2
65°	508.2	501.5	521.2	501.3	504.6
67.5°	431.2	434.5	432.6	420.1	424.9
70°	352.9	357.2	354.1	339.9	344.3
72.5°	281.4	276.1	279.4	261.7	269.8
75°	211.5	207.2	211.0	196.1	202.9
77.5°	144.0	147.4	145.0	137.1	141.6
80°	95.1	92.4	92.4	87.9	88.8
82.5°	55.5	52.8	52.1	50.7	52.8
85°	25.9	25.2	25.7	25.0	24.0
87.5°	9.4	9.6	9.6	9.1	8.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)