

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: P589026

Luminaire Tested: **FMR-24-2-LD4-2HI-40-UNV-81-94-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589026
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-81-94-EDD
Description: 2X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

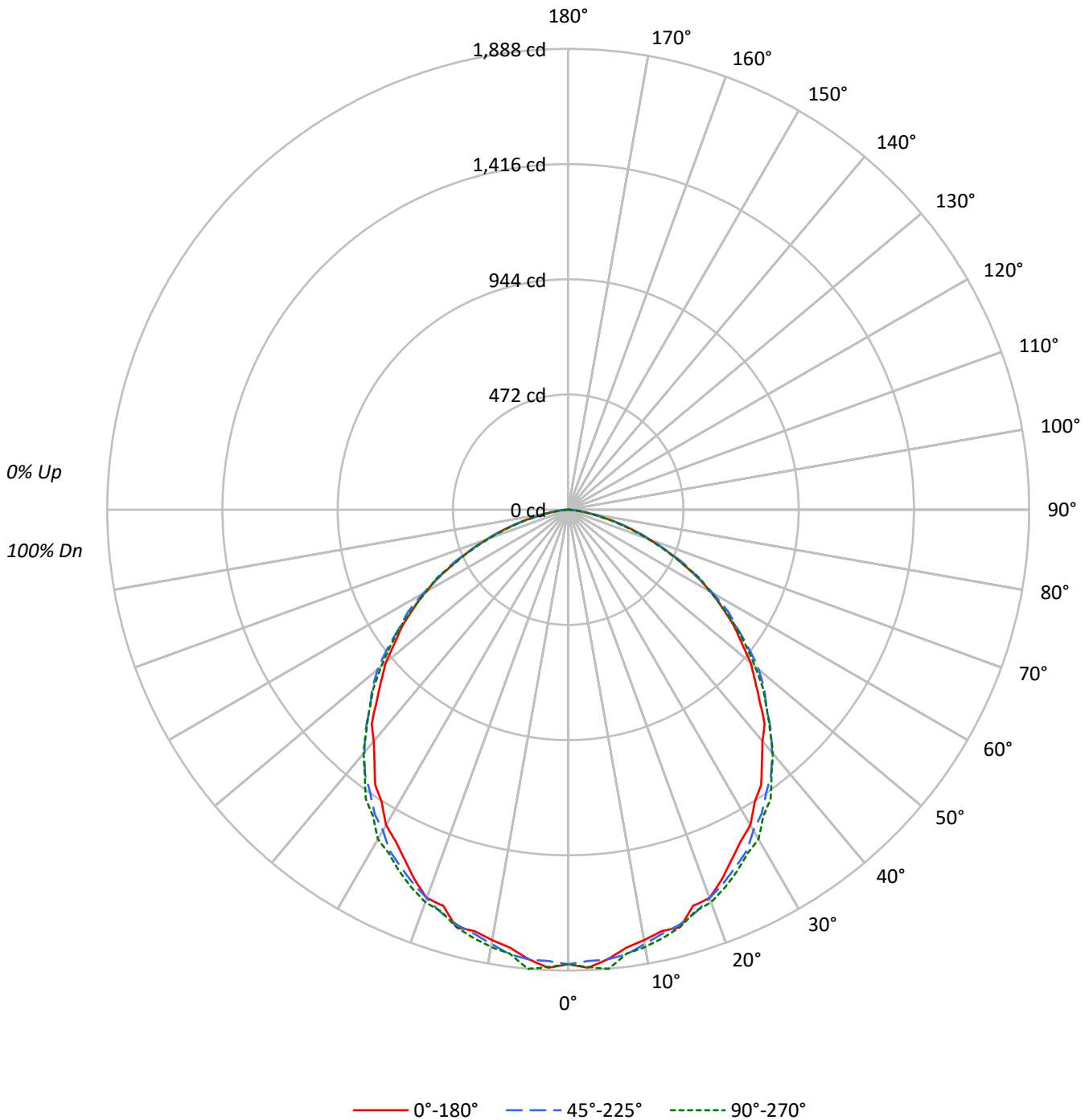
Lumens per Lamp: N/A
Luminaire Lumens: 4693.0 lumens
Efficiency: N/A
Efficacy: 108.6 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 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

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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°	5011	5011	5011
5°	4994	4996	5101
10°	4893	4936	4970
15°	4932	4905	4932
20°	4848	4848	4900
25°	4699	4802	4855
30°	4635	4716	4842
35°	4526	4644	4748
40°	4350	4559	4579
45°	4218	4368	4375
50°	4079	4263	4182
55°	3887	3963	3934
60°	3634	3671	3605
65°	3241	3324	3218
70°	2781	2790	2713
75°	2202	2197	2113
80°	1475	1435	1379
85°	803	794	741



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	175.2	3.7
10°-20°	496.4	10.6
20°-30°	743.7	15.8
30°-40°	881.5	18.8
40°-50°	883.1	18.8
50°-60°	749.6	16.0
60°-70°	505.4	10.8
70°-80°	222.1	4.7
80°-90°	36.1	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°	1415.3	30.2
0°-40°	2296.8	48.9
0°-60°	3929.5	83.7
0°-90°	4693.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4693.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1862	1862	1862	1862	1862	
5°	1849	1844	1850	1844	1888	174
15°	1770	1750	1761	1770	1770	493
25°	1583	1591	1617	1638	1635	732
35°	1378	1382	1414	1446	1445	855
45°	1108	1129	1148	1177	1150	857
55°	828	823	845	839	839	737
65°	509	502	522	502	505	506
75°	212	208	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°	1862.1	1862.1	1862.1	1862.1	1862.1
2.5°	1878.2	1864.0	1850.8	1866.2	1875.5
5°	1848.8	1844.5	1849.6	1844.0	1888.5
7.5°	1810.9	1827.4	1837.1	1831.0	1833.7
10°	1790.7	1784.9	1806.3	1821.2	1819.0
12.5°	1769.0	1777.7	1778.9	1795.0	1796.4
15°	1770.2	1749.8	1760.6	1769.7	1770.5
17.5°	1701.5	1723.6	1731.0	1752.0	1726.0
20°	1693.0	1676.9	1693.0	1714.4	1711.1
22.5°	1641.4	1623.3	1657.9	1676.9	1675.7
25°	1582.7	1591.3	1617.3	1638.5	1635.1
27.5°	1531.2	1541.3	1578.4	1607.5	1588.7
30°	1491.6	1486.5	1517.8	1543.7	1558.2
32.5°	1420.7	1438.9	1475.5	1501.2	1487.5
35°	1377.6	1381.7	1413.7	1446.4	1445.4
37.5°	1302.4	1321.4	1366.3	1375.5	1367.0
40°	1238.2	1257.2	1297.8	1307.7	1303.6
42.5°	1190.8	1194.2	1229.0	1240.3	1222.3
45°	1108.3	1129.0	1147.8	1177.3	1149.5
47.5°	1038.1	1047.8	1088.1	1096.1	1081.4
50°	974.4	977.8	1018.4	1008.6	999.0
52.5°	894.4	908.6	931.4	929.5	918.2
55°	828.5	823.0	844.6	838.8	838.6
57.5°	749.4	759.0	776.8	767.7	753.0
60°	675.3	675.6	682.1	671.7	669.8
62.5°	592.9	595.8	597.2	584.5	605.1
65°	509.0	502.2	522.0	502.0	505.4
67.5°	431.8	435.2	433.2	420.7	425.5
70°	353.4	357.7	354.6	340.4	344.8
72.5°	281.8	276.5	279.9	262.1	270.2
75°	211.8	207.5	211.3	196.4	203.2
77.5°	144.3	147.6	145.2	137.3	141.8
80°	95.2	92.6	92.6	88.0	89.0
82.5°	55.5	52.9	52.2	50.7	52.9
85°	26.0	25.2	25.7	25.0	24.0
87.5°	9.4	9.6	9.6	9.1	8.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)