

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: P589021

Luminaire Tested: **FMR-24-2-LD4-2HI-40-UNV-81-84-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589021
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-81-84-EDD
Description: 2X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

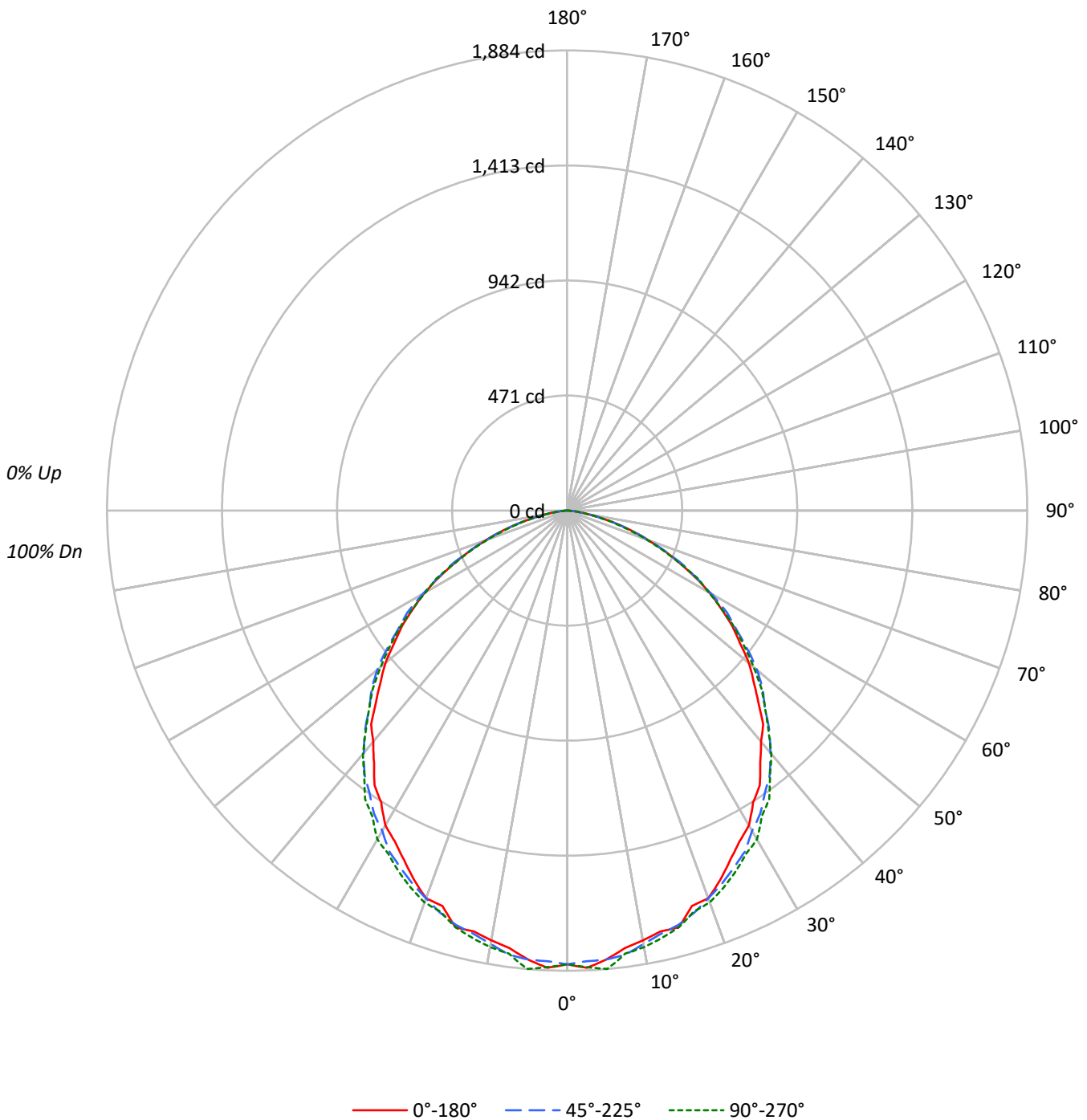
Lumens per Lamp: N/A
Luminaire Lumens: 4682.0 lumens
Efficiency: N/A
Efficacy: 108.4 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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°	4999	4999	4999
5°	4982	4984	5089
10°	4882	4924	4959
15°	4920	4893	4921
20°	4837	4837	4889
25°	4688	4791	4844
30°	4624	4705	4830
35°	4515	4633	4737
40°	4339	4548	4568
45°	4208	4358	4364
50°	4070	4253	4172
55°	3878	3953	3925
60°	3626	3662	3596
65°	3233	3316	3210
70°	2774	2784	2707
75°	2197	2192	2108
80°	1472	1430	1375
85°	800	794	741



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	174.7	3.7
10°-20°	495.2	10.6
20°-30°	742.0	15.8
30°-40°	879.4	18.8
40°-50°	881.0	18.8
50°-60°	747.8	16.0
60°-70°	504.2	10.8
70°-80°	221.5	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°	1412.0	30.2
0°-40°	2291.4	48.9
0°-60°	3920.3	83.7
0°-90°	4682.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4682.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1858	1858	1858	1858	1858	
5°	1844	1840	1845	1840	1884	174
15°	1766	1746	1756	1766	1766	492
25°	1579	1588	1614	1635	1631	730
35°	1374	1378	1410	1443	1442	853
45°	1106	1126	1145	1175	1147	855
55°	827	821	843	837	837	735
65°	508	501	521	501	504	505
75°	211	207	211	196	203	226
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°	1857.7	1857.7	1857.7	1857.7	1857.7
2.5°	1873.8	1859.6	1846.4	1861.8	1871.1
5°	1844.5	1840.2	1845.2	1839.7	1884.1
7.5°	1806.6	1823.2	1832.8	1826.8	1829.4
10°	1786.5	1780.7	1802.1	1816.9	1814.8
12.5°	1764.9	1773.5	1774.7	1790.8	1792.2
15°	1766.1	1745.7	1756.5	1765.6	1766.3
17.5°	1697.5	1719.5	1727.0	1747.8	1721.9
20°	1689.1	1673.0	1689.1	1710.4	1707.1
22.5°	1637.5	1619.5	1654.1	1673.0	1671.8
25°	1579.0	1587.6	1613.5	1634.6	1631.3
27.5°	1527.7	1537.7	1574.7	1603.7	1585.0
30°	1488.1	1483.0	1514.2	1540.1	1554.5
32.5°	1417.3	1435.5	1472.0	1497.7	1484.0
35°	1374.4	1378.5	1410.4	1443.0	1442.0
37.5°	1299.3	1318.3	1363.1	1372.2	1363.8
40°	1235.3	1254.2	1294.8	1304.6	1300.5
42.5°	1188.0	1191.4	1226.2	1237.4	1219.4
45°	1105.7	1126.4	1145.1	1174.6	1146.8
47.5°	1035.7	1045.3	1085.6	1093.5	1078.9
50°	972.1	975.5	1016.0	1006.2	996.6
52.5°	892.3	906.4	929.2	927.3	916.0
55°	826.6	821.0	842.6	836.9	836.6
57.5°	747.6	757.2	775.0	765.9	751.2
60°	673.8	674.0	680.5	670.2	668.2
62.5°	591.5	594.4	595.8	583.1	603.7
65°	507.8	501.1	520.7	500.8	504.2
67.5°	430.8	434.1	432.2	419.8	424.5
70°	352.6	356.9	353.8	339.6	344.0
72.5°	281.1	275.8	279.2	261.4	269.6
75°	211.3	207.0	210.8	196.0	202.7
77.5°	143.9	147.3	144.9	137.0	141.5
80°	95.0	92.3	92.3	87.8	88.7
82.5°	55.4	52.8	52.0	50.6	52.8
85°	25.9	25.2	25.7	24.9	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)