

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: P589313

Luminaire Tested: **FMR-24-2-LD4-3HI-40-UNV-81-88-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589313
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-LD4-3HI-40-UNV-81-88-EDD
Description: 2X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

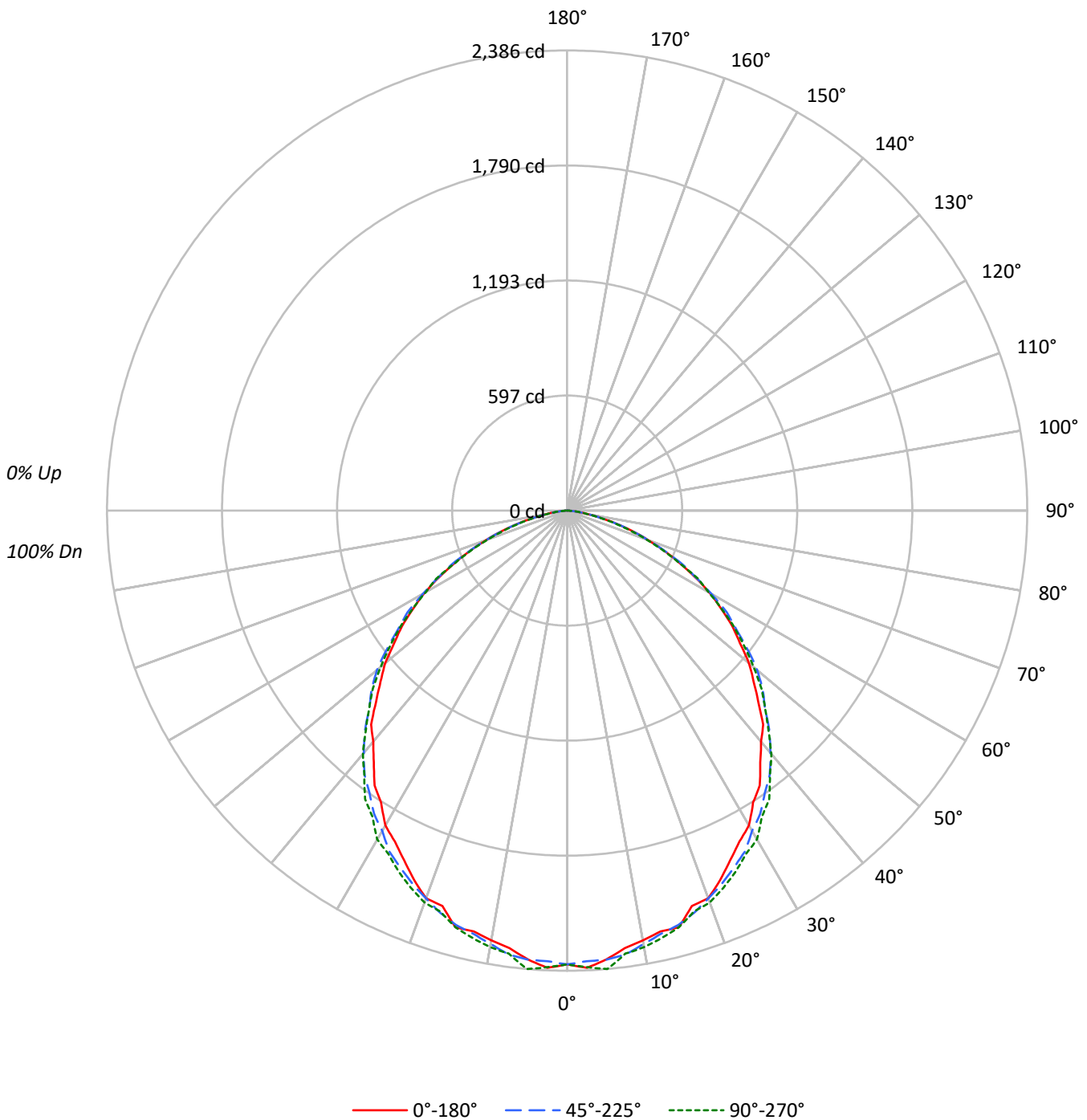
Lumens per Lamp: N/A
Luminaire Lumens: 5930.0 lumens
Efficiency: N/A
Efficacy: 91.5 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 64.8
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: P589313

CATALOG NUMBER: FMR-24-2-LD4-3HI-40-UNV-81-88-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P589313

CATALOG NUMBER: FMR-24-2-LD4-3HI-40-UNV-81-88-EDD

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°	6332	6332	6332
5°	6311	6313	6446
10°	6183	6237	6281
15°	6232	6198	6232
20°	6126	6126	6192
25°	5938	6068	6135
30°	5856	5959	6118
35°	5718	5868	6000
40°	5496	5761	5786
45°	5330	5519	5527
50°	5155	5388	5285
55°	4912	5007	4971
60°	4593	4639	4555
65°	4095	4199	4066
70°	3514	3526	3427
75°	2782	2776	2669
80°	1864	1813	1742
85°	1013	1003	939



TEST NUMBER: P589313

CATALOG NUMBER: FMR-24-2-LD4-3HI-40-UNV-81-88-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	221.3	3.7
10°-20°	627.3	10.6
20°-30°	939.8	15.8
30°-40°	1113.8	18.8
40°-50°	1115.9	18.8
50°-60°	947.2	16.0
60°-70°	638.6	10.8
70°-80°	280.6	4.7
80°-90°	45.6	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°	1788.3	30.2
0°-40°	2902.2	48.9
0°-60°	4965.2	83.7
0°-90°	5930.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5930.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2353	2353	2353	2353	2353	
5°	2336	2331	2337	2330	2386	220
15°	2237	2211	2225	2236	2237	623
25°	2000	2011	2044	2070	2066	925
35°	1741	1746	1786	1828	1826	1081
45°	1400	1427	1450	1488	1452	1083
55°	1047	1040	1067	1060	1060	931
65°	643	635	660	634	639	640
75°	268	262	267	248	257	287
85°	33	32	32	32	30	48
90°	0	0	0	0	0	



TEST NUMBER: P589313

CATALOG NUMBER: FMR-24-2-LD4-3HI-40-UNV-81-88-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2352.9	2352.9	2352.9	2352.9	2352.9
2.5°	2373.2	2355.3	2338.6	2358.0	2369.9
5°	2336.2	2330.7	2337.1	2330.1	2386.3
7.5°	2288.2	2309.1	2321.3	2313.7	2317.0
10°	2262.6	2255.4	2282.4	2301.2	2298.5
12.5°	2235.3	2246.2	2247.8	2268.1	2269.9
15°	2236.8	2211.0	2224.7	2236.2	2237.1
17.5°	2149.9	2177.9	2187.3	2213.7	2180.9
20°	2139.3	2119.0	2139.3	2166.3	2162.1
22.5°	2074.0	2051.2	2095.0	2119.0	2117.4
25°	1999.9	2010.8	2043.6	2070.3	2066.1
27.5°	1934.9	1947.6	1994.4	2031.2	2007.5
30°	1884.7	1878.4	1917.8	1950.7	1968.9
32.5°	1795.1	1818.2	1864.4	1896.9	1879.6
35°	1740.7	1745.9	1786.3	1827.6	1826.4
37.5°	1645.6	1669.6	1726.5	1738.0	1727.4
40°	1564.5	1588.5	1639.9	1652.3	1647.2
42.5°	1504.7	1508.9	1553.0	1567.3	1544.5
45°	1400.5	1426.6	1450.3	1487.7	1452.4
47.5°	1311.8	1323.9	1375.0	1385.0	1366.5
50°	1231.3	1235.5	1286.9	1274.4	1262.3
52.5°	1130.1	1148.0	1176.9	1174.5	1160.2
55°	1046.9	1039.9	1067.2	1059.9	1059.6
57.5°	946.9	959.1	981.6	970.0	951.5
60°	853.4	853.7	861.9	848.8	846.4
62.5°	749.2	752.8	754.6	738.5	764.6
65°	643.1	634.6	659.5	634.3	638.6
67.5°	545.6	549.9	547.4	531.6	537.7
70°	446.6	452.0	448.1	430.2	435.6
72.5°	356.0	349.4	353.6	331.1	341.5
75°	267.6	262.2	267.0	248.2	256.7
77.5°	182.3	186.5	183.5	173.5	179.2
80°	120.3	117.0	117.0	111.2	112.4
82.5°	70.2	66.8	65.9	64.1	66.8
85°	32.8	31.9	32.5	31.6	30.4
87.5°	11.8	12.2	12.2	11.5	10.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)