

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: P589120

Luminaire Tested: **FMR-24-2-LD4-2LO-40-UNV-81-87-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589120
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-LD4-2LO-40-UNV-81-87-EDD
Description: 2X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

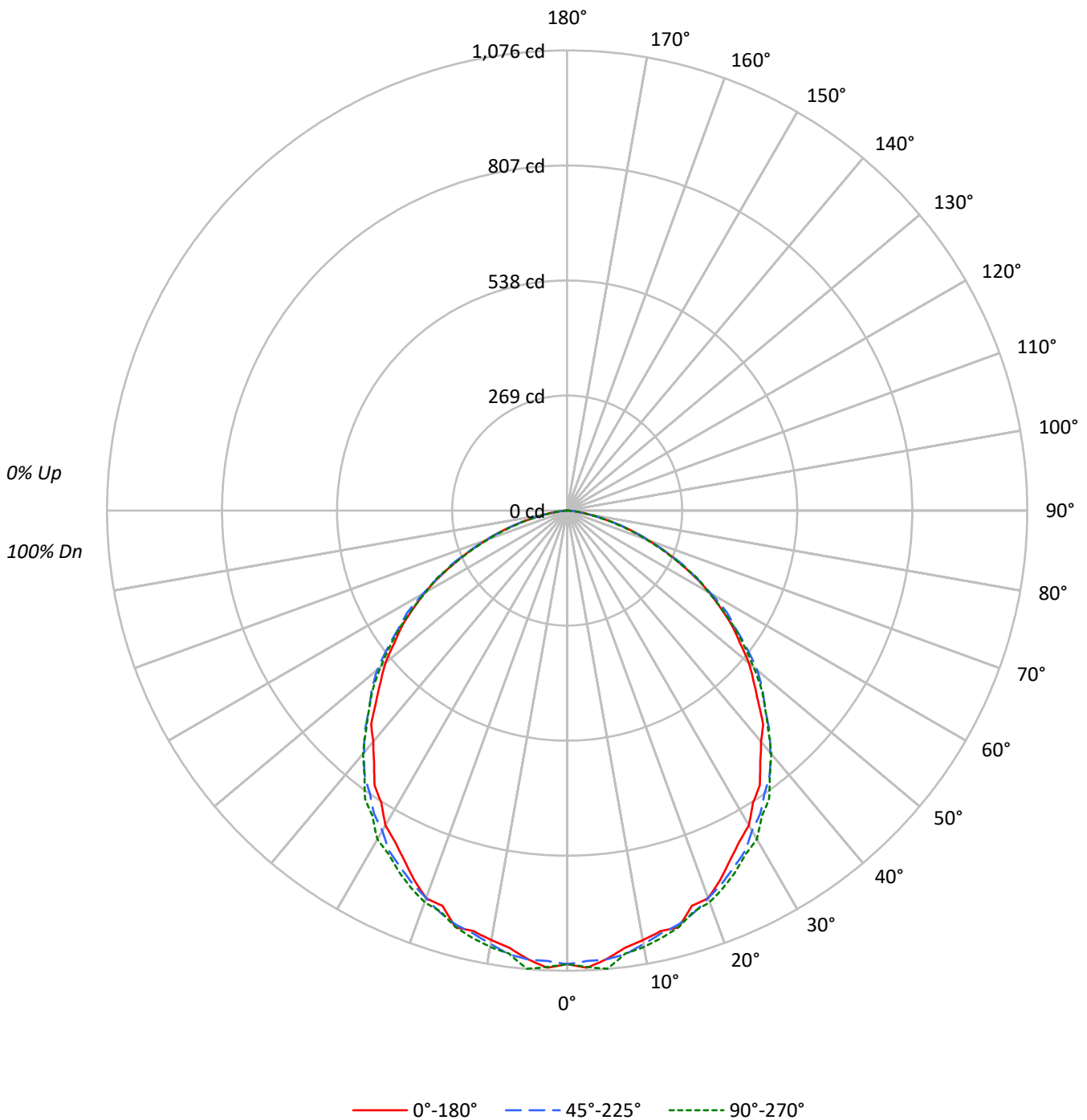
Lumens per Lamp: N/A
Luminaire Lumens: 2673.0 lumens
Efficiency: N/A
Efficacy: 114.2 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 23.4
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: P589120

CATALOG NUMBER: FMR-24-2-LD4-2LO-40-UNV-81-87-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P589120

CATALOG NUMBER: FMR-24-2-LD4-2LO-40-UNV-81-87-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	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					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°	2854	2854	2854
5°	2844	2846	2905
10°	2787	2811	2831
15°	2809	2794	2809
20°	2761	2761	2791
25°	2677	2735	2765
30°	2640	2686	2758
35°	2578	2645	2705
40°	2477	2597	2608
45°	2402	2488	2492
50°	2323	2429	2382
55°	2214	2257	2241
60°	2070	2091	2053
65°	1846	1893	1833
70°	1584	1589	1545
75°	1254	1252	1203
80°	840	817	786
85°	457	454	423



TEST NUMBER: P589120

CATALOG NUMBER: FMR-24-2-LD4-2LO-40-UNV-81-87-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	99.8	3.7
10°-20°	282.7	10.6
20°-30°	423.6	15.8
30°-40°	502.1	18.8
40°-50°	503.0	18.8
50°-60°	427.0	16.0
60°-70°	287.9	10.8
70°-80°	126.5	4.7
80°-90°	20.6	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°	806.1	30.2
0°-40°	1308.2	48.9
0°-60°	2238.1	83.7
0°-90°	2673.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2673.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1061	1061	1061	1061	1061	
5°	1053	1051	1054	1050	1076	99
15°	1008	997	1003	1008	1008	281
25°	902	906	921	933	931	417
35°	785	787	805	824	823	487
45°	631	643	654	671	655	488
55°	472	469	481	478	478	420
65°	290	286	297	286	288	288
75°	121	118	120	112	116	129
85°	15	14	15	14	14	21
90°	0	0	0	0	0	



TEST NUMBER: P589120

CATALOG NUMBER: FMR-24-2-LD4-2LO-40-UNV-81-87-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1060.6	1060.6	1060.6	1060.6	1060.6
2.5°	1069.8	1061.7	1054.1	1062.9	1068.2
5°	1053.0	1050.6	1053.5	1050.3	1075.6
7.5°	1031.4	1040.9	1046.3	1042.9	1044.4
10°	1019.9	1016.6	1028.8	1037.3	1036.1
12.5°	1007.6	1012.5	1013.2	1022.4	1023.2
15°	1008.3	996.6	1002.8	1008.0	1008.4
17.5°	969.1	981.7	985.9	997.9	983.1
20°	964.3	955.1	964.3	976.5	974.6
22.5°	934.9	924.6	944.3	955.1	954.5
25°	901.5	906.4	921.2	933.2	931.3
27.5°	872.2	877.9	899.0	915.6	904.9
30°	849.6	846.7	864.5	879.3	887.5
32.5°	809.2	819.6	840.4	855.0	847.2
35°	784.7	787.0	805.2	823.8	823.3
37.5°	741.8	752.6	778.2	783.4	778.6
40°	705.2	716.0	739.2	744.8	742.5
42.5°	678.3	680.2	700.0	706.5	696.2
45°	631.3	643.1	653.7	670.6	654.7
47.5°	591.3	596.8	619.8	624.3	615.9
50°	555.0	556.9	580.1	574.5	569.0
52.5°	509.4	517.5	530.5	529.4	523.0
55°	471.9	468.7	481.1	477.8	477.6
57.5°	426.8	432.3	442.4	437.2	428.9
60°	384.7	384.8	388.5	382.6	381.5
62.5°	337.7	339.3	340.2	332.9	344.7
65°	289.9	286.1	297.3	285.9	287.8
67.5°	245.9	247.9	246.8	239.6	242.4
70°	201.3	203.8	202.0	193.9	196.4
72.5°	160.5	157.5	159.4	149.3	153.9
75°	120.6	118.2	120.4	111.9	115.7
77.5°	82.2	84.1	82.7	78.2	80.8
80°	54.2	52.7	52.7	50.1	50.7
82.5°	31.6	30.1	29.7	28.9	30.1
85°	14.8	14.4	14.7	14.2	13.7
87.5°	5.3	5.5	5.5	5.2	4.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)