

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: P589216

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

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589216
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-LD4-2STD-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

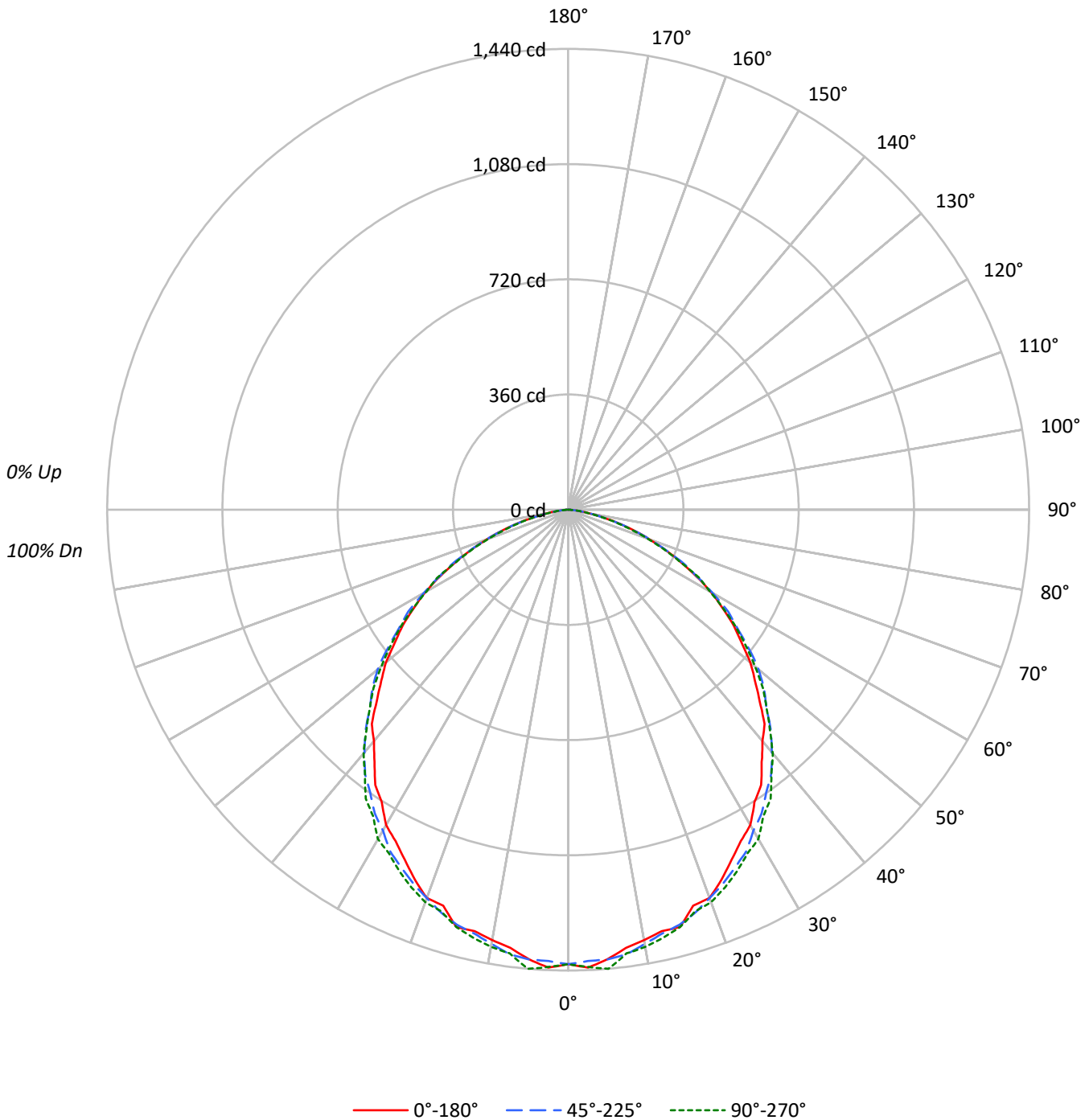
Lumens per Lamp: N/A
Luminaire Lumens: 3579.0 lumens
Efficiency: N/A
Efficacy: 107.5 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 33.3
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: P589216

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

Luminous Intensity Polar Plot





TEST NUMBER: P589216

CATALOG NUMBER: FMR-24-2-LD4-2STD-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	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°	3821	3821	3821
5°	3809	3810	3890
10°	3731	3764	3791
15°	3761	3741	3762
20°	3698	3698	3737
25°	3584	3662	3703
30°	3535	3597	3692
35°	3451	3542	3621
40°	3317	3477	3492
45°	3217	3331	3336
50°	3111	3252	3189
55°	2964	3022	3000
60°	2772	2800	2749
65°	2472	2535	2454
70°	2120	2127	2068
75°	1679	1676	1611
80°	1125	1094	1051
85°	611	605	565



TEST NUMBER: P589216

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

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	133.6	3.7
10°-20°	378.6	10.6
20°-30°	567.2	15.8
30°-40°	672.2	18.8
40°-50°	673.5	18.8
50°-60°	571.7	16.0
60°-70°	385.4	10.8
70°-80°	169.4	4.7
80°-90°	27.5	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°	1079.3	30.2
0°-40°	1751.6	48.9
0°-60°	2996.7	83.7
0°-90°	3579.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3579.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1420	1420	1420	1420	1420	
5°	1410	1407	1410	1406	1440	133
15°	1350	1334	1343	1350	1350	376
25°	1207	1214	1233	1250	1247	558
35°	1051	1054	1078	1103	1102	652
45°	845	861	875	898	877	654
55°	632	628	644	640	640	562
65°	388	383	398	383	385	386
75°	162	158	161	150	155	173
85°	20	19	20	19	18	29
90°	0	0	0	0	0	



TEST NUMBER: P589216

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

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1420.1	1420.1	1420.1	1420.1	1420.1
2.5°	1432.3	1421.5	1411.4	1423.2	1430.3
5°	1410.0	1406.7	1410.5	1406.3	1440.2
7.5°	1381.0	1393.7	1401.0	1396.4	1398.4
10°	1365.6	1361.2	1377.5	1388.9	1387.2
12.5°	1349.1	1355.7	1356.6	1368.9	1370.0
15°	1350.0	1334.4	1342.7	1349.6	1350.2
17.5°	1297.6	1314.4	1320.1	1336.1	1316.3
20°	1291.2	1278.9	1291.2	1307.5	1304.9
22.5°	1251.7	1238.0	1264.4	1278.9	1278.0
25°	1207.0	1213.6	1233.4	1249.5	1247.0
27.5°	1167.8	1175.5	1203.7	1225.9	1211.6
30°	1137.5	1133.7	1157.5	1177.3	1188.3
32.5°	1083.4	1097.4	1125.2	1144.8	1134.4
35°	1050.6	1053.7	1078.1	1103.0	1102.3
37.5°	993.2	1007.7	1042.0	1049.0	1042.5
40°	944.3	958.7	989.7	997.2	994.1
42.5°	908.1	910.7	937.3	945.9	932.2
45°	845.3	861.0	875.3	897.9	876.6
47.5°	791.7	799.0	829.8	835.9	824.7
50°	743.1	745.7	776.7	769.2	761.8
52.5°	682.1	692.9	710.3	708.8	700.2
55°	631.8	627.6	644.1	639.7	639.5
57.5°	571.5	578.8	592.4	585.4	574.3
60°	515.0	515.2	520.2	512.3	510.8
62.5°	452.1	454.3	455.4	445.7	461.5
65°	388.2	383.0	398.1	382.8	385.4
67.5°	329.3	331.9	330.4	320.9	324.5
70°	269.5	272.8	270.4	259.6	262.9
72.5°	214.9	210.9	213.4	199.9	206.1
75°	161.5	158.2	161.2	149.8	154.9
77.5°	110.0	112.6	110.7	104.7	108.2
80°	72.6	70.6	70.6	67.1	67.8
82.5°	42.4	40.3	39.8	38.7	40.3
85°	19.8	19.3	19.6	19.1	18.3
87.5°	7.2	7.3	7.3	7.0	6.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)