

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: P589184

Luminaire Tested: **FMR-24-2-LD4-2STD-35-UNV-81-87-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589184
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-35-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 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

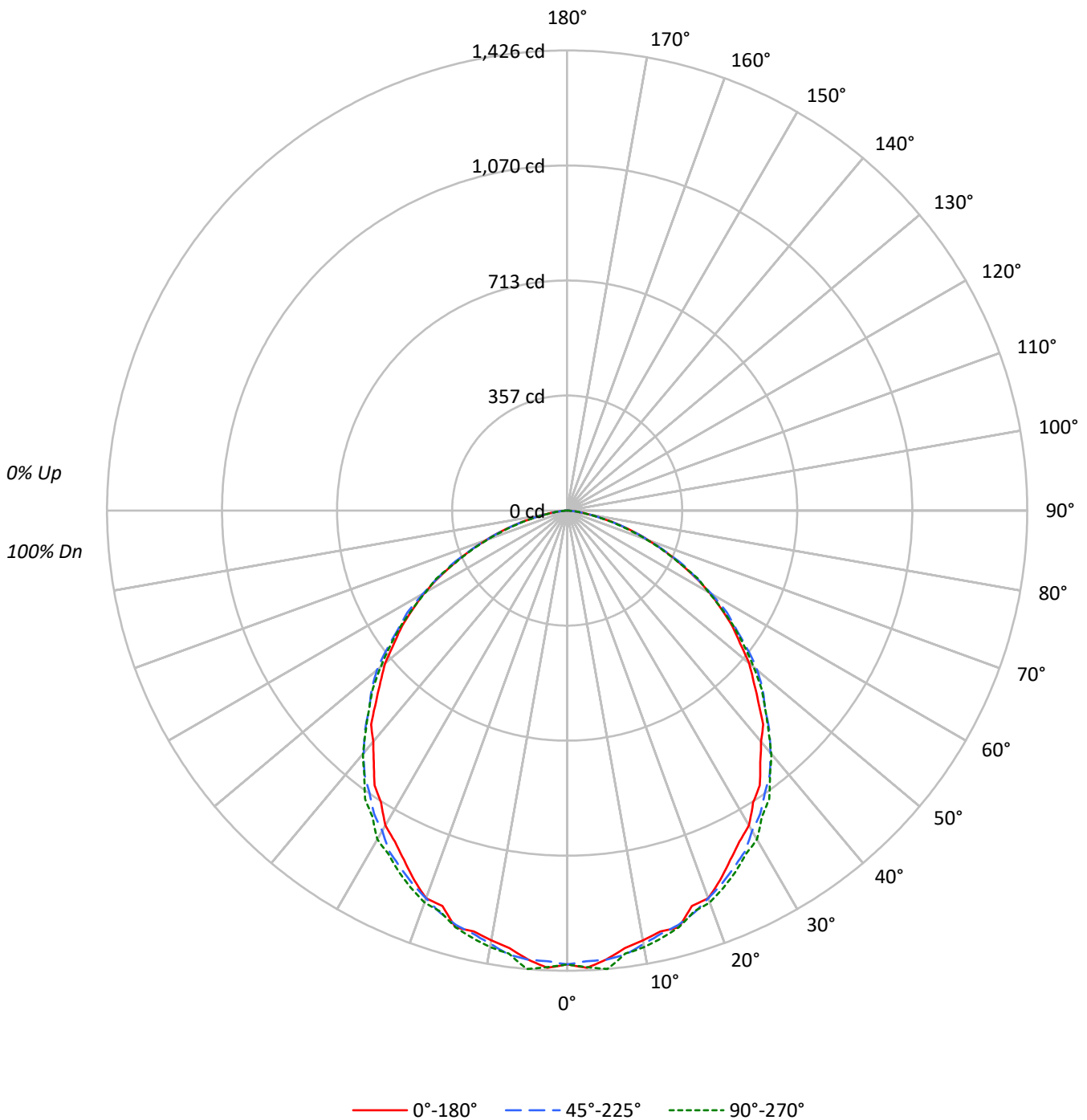
Lumens per Lamp: N/A
Luminaire Lumens: 3544.0 lumens
Efficiency: N/A
Efficacy: 106.4 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 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: P589184

CATALOG NUMBER: FMR-24-2-LD4-2STD-35-UNV-81-87-EDD

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	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					86			
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73					73			
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62					62			
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53					53			
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46					46			
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41					41			
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36					36			
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32					32			
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29					29			
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26					26			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3784	3784	3784
5°	3771	3773	3852
10°	3695	3727	3754
15°	3724	3704	3725
20°	3661	3661	3700
25°	3549	3626	3666
30°	3500	3562	3656
35°	3417	3507	3586
40°	3284	3443	3458
45°	3185	3299	3303
50°	3081	3220	3158
55°	2936	2992	2971
60°	2745	2772	2722
65°	2448	2510	2430
70°	2100	2107	2049
75°	1664	1659	1595
80°	1114	1083	1041
85°	605	599	562



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	132.3	3.7
10°-20°	374.9	10.6
20°-30°	561.6	15.8
30°-40°	665.7	18.8
40°-50°	666.9	18.8
50°-60°	566.1	16.0
60°-70°	381.7	10.8
70°-80°	167.7	4.7
80°-90°	27.3	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°	1068.8	30.2
0°-40°	1734.4	48.9
0°-60°	2967.4	83.7
0°-90°	3544.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3544.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1406	1406	1406	1406	1406	
5°	1396	1393	1397	1393	1426	132
15°	1337	1321	1330	1336	1337	372
25°	1195	1202	1221	1237	1235	553
35°	1040	1043	1068	1092	1092	646
45°	837	853	867	889	868	647
55°	626	622	638	634	633	557
65°	384	379	394	379	382	382
75°	160	157	160	148	153	171
85°	20	19	19	19	18	28
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1406.2	1406.2	1406.2	1406.2	1406.2
2.5°	1418.3	1407.6	1397.6	1409.3	1416.3
5°	1396.2	1392.9	1396.7	1392.6	1426.1
7.5°	1367.5	1380.0	1387.3	1382.7	1384.7
10°	1352.2	1347.9	1364.0	1375.3	1373.7
12.5°	1335.9	1342.4	1343.4	1355.5	1356.6
15°	1336.8	1321.4	1329.6	1336.5	1337.0
17.5°	1284.9	1301.6	1307.2	1323.0	1303.4
20°	1278.5	1266.4	1278.5	1294.7	1292.2
22.5°	1239.5	1225.9	1252.0	1266.4	1265.5
25°	1195.2	1201.7	1221.3	1237.3	1234.8
27.5°	1156.3	1164.0	1191.9	1213.9	1199.7
30°	1126.4	1122.6	1146.2	1165.8	1176.7
32.5°	1072.8	1086.6	1114.2	1133.7	1123.3
35°	1040.3	1043.4	1067.6	1092.3	1091.5
37.5°	983.5	997.8	1031.8	1038.7	1032.3
40°	935.0	949.4	980.1	987.5	984.4
42.5°	899.3	901.8	928.1	936.7	923.0
45°	837.0	852.6	866.8	889.1	868.0
47.5°	784.0	791.2	821.7	827.7	816.6
50°	735.9	738.4	769.1	761.6	754.4
52.5°	675.4	686.1	703.4	701.9	693.4
55°	625.7	621.5	637.8	633.5	633.3
57.5°	565.9	573.2	586.6	579.7	568.6
60°	510.0	510.2	515.1	507.3	505.8
62.5°	447.7	449.9	451.0	441.4	457.0
65°	384.4	379.3	394.2	379.1	381.6
67.5°	326.1	328.6	327.2	317.7	321.4
70°	266.9	270.2	267.8	257.1	260.4
72.5°	212.8	208.8	211.3	197.9	204.1
75°	160.0	156.7	159.6	148.3	153.4
77.5°	108.9	111.5	109.7	103.7	107.1
80°	71.9	69.9	69.9	66.5	67.2
82.5°	41.9	39.9	39.4	38.3	39.9
85°	19.6	19.1	19.4	18.9	18.2
87.5°	7.1	7.3	7.3	6.9	6.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)