

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: P589214

Luminaire Tested: **FMR-24-2-LD4-2STD-40-UNV-81-85-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589214
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-81-85-EDD
Description: 2X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

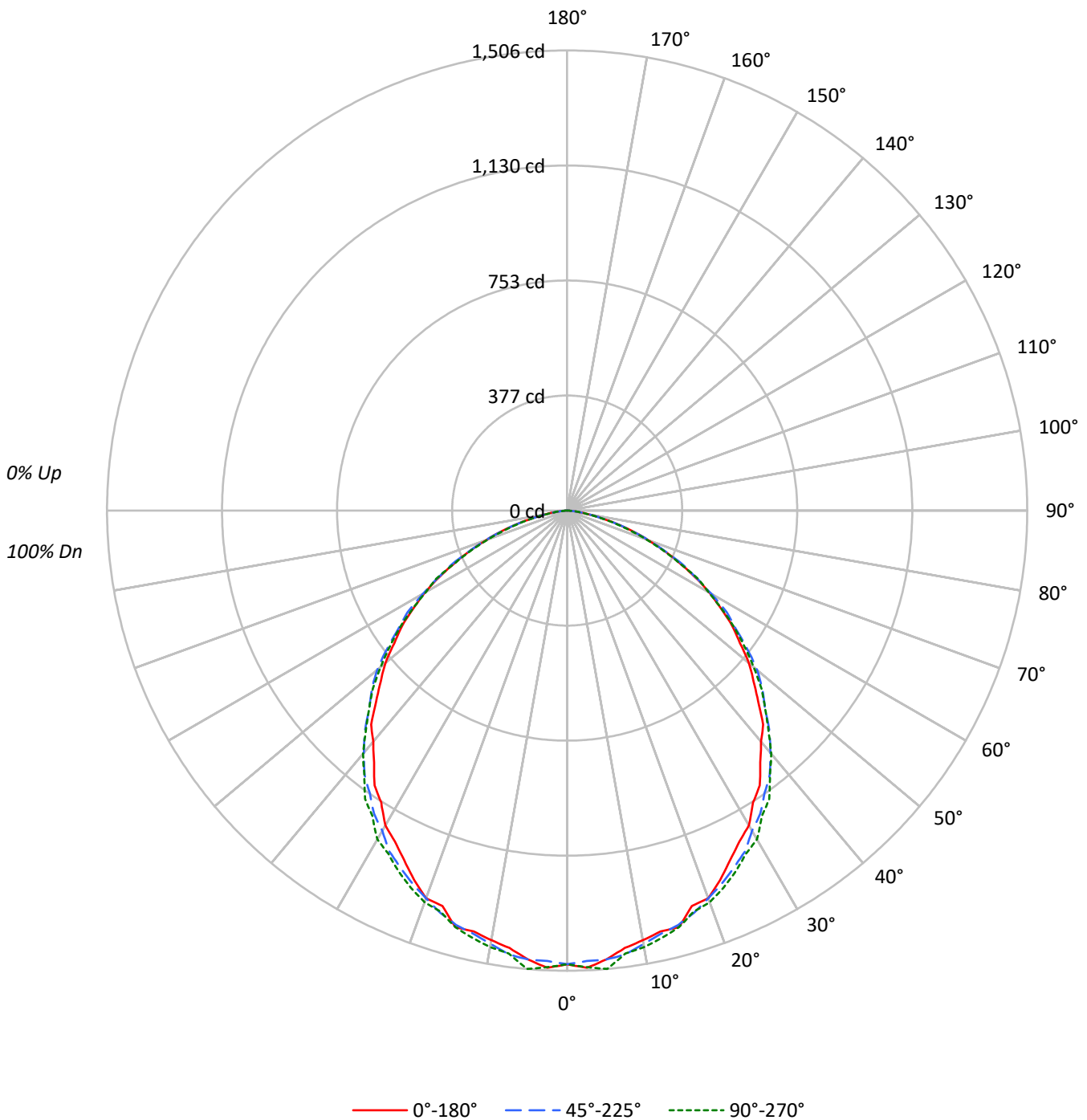
Lumens per Lamp: N/A
Luminaire Lumens: 3742.0 lumens
Efficiency: N/A
Efficacy: 112.4 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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: P589214

CATALOG NUMBER: FMR-24-2-LD4-2STD-40-UNV-81-85-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	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°	3995	3995	3995
5°	3982	3984	4068
10°	3901	3936	3963
15°	3932	3911	3933
20°	3866	3866	3907
25°	3747	3829	3871
30°	3695	3760	3860
35°	3609	3703	3786
40°	3468	3635	3651
45°	3363	3483	3488
50°	3253	3399	3334
55°	3099	3159	3137
60°	2898	2927	2875
65°	2584	2650	2566
70°	2217	2225	2163
75°	1756	1752	1684
80°	1176	1144	1099
85°	639	633	593



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	139.7	3.7
10°-20°	395.8	10.6
20°-30°	593.0	15.8
30°-40°	702.8	18.8
40°-50°	704.1	18.8
50°-60°	597.7	16.0
60°-70°	403.0	10.8
70°-80°	177.1	4.7
80°-90°	28.8	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°	1128.5	30.2
0°-40°	1831.3	48.9
0°-60°	3133.2	83.7
0°-90°	3742.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3742.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1485	1485	1485	1485	1485	
5°	1474	1471	1475	1470	1506	139
15°	1412	1395	1404	1411	1412	393
25°	1262	1269	1290	1306	1304	583
35°	1098	1102	1127	1153	1152	682
45°	884	900	915	939	916	684
55°	661	656	673	669	669	588
65°	406	400	416	400	403	404
75°	169	165	168	157	162	181
85°	21	20	20	20	19	30
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1484.7	1484.7	1484.7	1484.7	1484.7
2.5°	1497.6	1486.3	1475.7	1488.0	1495.5
5°	1474.2	1470.7	1474.8	1470.4	1505.8
7.5°	1443.9	1457.1	1464.8	1460.0	1462.1
10°	1427.8	1423.2	1440.3	1452.1	1450.4
12.5°	1410.5	1417.4	1418.4	1431.2	1432.4
15°	1411.5	1395.2	1403.8	1411.1	1411.7
17.5°	1356.7	1374.3	1380.3	1396.9	1376.2
20°	1350.0	1337.1	1350.0	1367.0	1364.3
22.5°	1308.7	1294.4	1322.0	1337.1	1336.2
25°	1262.0	1268.9	1289.6	1306.4	1303.8
27.5°	1220.9	1229.0	1258.5	1281.7	1266.8
30°	1189.3	1185.3	1210.2	1230.9	1242.4
32.5°	1132.8	1147.3	1176.5	1197.0	1186.1
35°	1098.5	1101.7	1127.2	1153.3	1152.5
37.5°	1038.4	1053.6	1089.4	1096.7	1090.0
40°	987.3	1002.4	1034.8	1042.7	1039.4
42.5°	949.5	952.2	980.0	989.0	974.6
45°	883.7	900.2	915.2	938.8	916.5
47.5°	827.8	835.4	867.6	874.0	862.3
50°	777.0	779.7	812.0	804.2	796.5
52.5°	713.1	724.4	742.7	741.1	732.1
55°	660.6	656.2	673.4	668.8	668.7
57.5°	597.5	605.2	619.4	612.1	600.4
60°	538.5	538.7	543.9	535.6	534.1
62.5°	472.7	475.0	476.2	466.0	482.5
65°	405.8	400.5	416.2	400.3	403.0
67.5°	344.3	347.0	345.4	335.5	339.3
70°	281.8	285.3	282.8	271.4	274.9
72.5°	224.7	220.5	223.1	209.0	215.5
75°	168.9	165.4	168.5	156.6	162.0
77.5°	115.0	117.7	115.8	109.5	113.1
80°	75.9	73.8	73.8	70.2	70.9
82.5°	44.3	42.2	41.6	40.4	42.2
85°	20.7	20.1	20.5	19.9	19.2
87.5°	7.5	7.7	7.7	7.3	6.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)