

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: P589225

Luminaire Tested: **FMR-24-2-LD4-2STD-40-UNV-82-88-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P589225  
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-82-88-EDD  
Description: 2X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

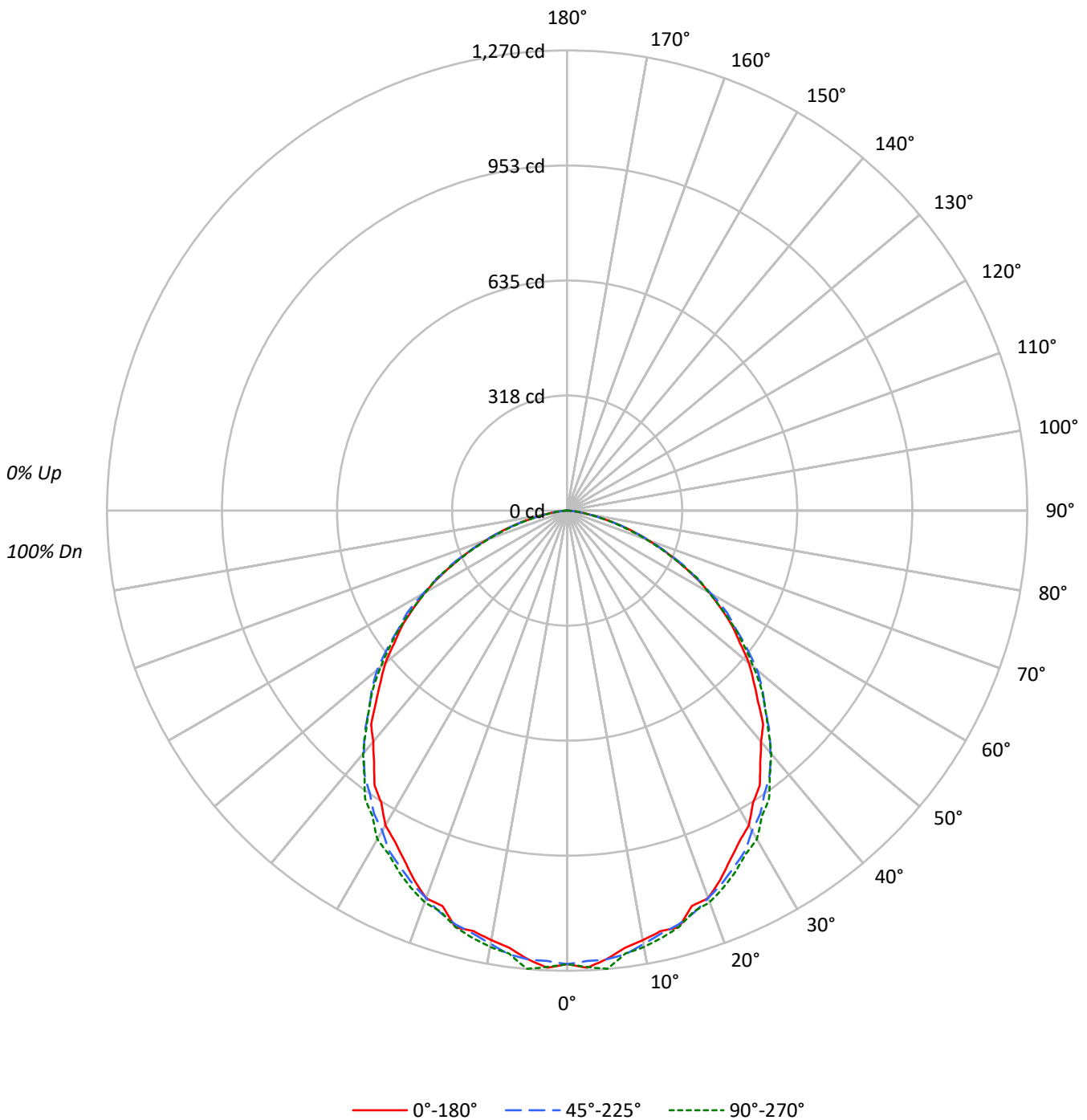
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3155.0 lumens  
Efficiency: N/A  
Efficacy: 94.7 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

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### 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°	3369	3369	3369
5°	3357	3359	3430
10°	3289	3318	3342
15°	3316	3297	3316
20°	3259	3259	3294
25°	3159	3228	3264
30°	3116	3171	3255
35°	3042	3122	3192
40°	2924	3065	3079
45°	2836	2936	2941
50°	2743	2866	2812
55°	2613	2664	2645
60°	2443	2468	2423
65°	2179	2234	2163
70°	1869	1876	1824
75°	1481	1477	1420
80°	992	964	927
85°	540	534	500



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	117.8	3.7
10°-20°	333.7	10.6
20°-30°	500.0	15.8
30°-40°	592.6	18.8
40°-50°	593.7	18.8
50°-60°	503.9	16.0
60°-70°	339.8	10.8
70°-80°	149.3	4.7
80°-90°	24.3	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°	951.5	30.2
0°-40°	1544.1	48.9
0°-60°	2641.7	83.7
0°-90°	3155.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3155.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1252	1252	1252	1252	1252	
5°	1243	1240	1243	1240	1270	117
15°	1190	1176	1184	1190	1190	332
25°	1064	1070	1087	1102	1099	492
35°	926	929	950	972	972	575
45°	745	759	772	792	773	576
55°	557	553	568	564	564	495
65°	342	338	351	338	340	340
75°	142	140	142	132	137	153
85°	18	17	17	17	16	25
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1251.8	1251.8	1251.8	1251.8	1251.8
2.5°	1262.7	1253.1	1244.2	1254.6	1260.9
5°	1242.9	1240.0	1243.4	1239.7	1269.6
7.5°	1217.4	1228.5	1235.0	1231.0	1232.8
10°	1203.8	1199.9	1214.3	1224.3	1222.9
12.5°	1189.3	1195.1	1195.9	1206.7	1207.7
15°	1190.1	1176.3	1183.6	1189.8	1190.2
17.5°	1143.9	1158.7	1163.7	1177.8	1160.3
20°	1138.2	1127.4	1138.2	1152.6	1150.3
22.5°	1103.4	1091.3	1114.6	1127.4	1126.6
25°	1064.0	1069.8	1087.3	1101.5	1099.2
27.5°	1029.4	1036.2	1061.1	1080.7	1068.1
30°	1002.8	999.4	1020.4	1037.8	1047.5
32.5°	955.1	967.4	991.9	1009.2	1000.0
35°	926.1	928.9	950.4	972.4	971.7
37.5°	875.5	888.3	918.5	924.7	919.0
40°	832.4	845.2	872.5	879.1	876.4
42.5°	800.6	802.8	826.3	833.8	821.7
45°	745.1	759.0	771.6	791.5	772.8
47.5°	697.9	704.4	731.5	736.9	727.0
50°	655.1	657.3	684.7	678.0	671.6
52.5°	601.3	610.8	626.2	624.9	617.3
55°	557.0	553.3	567.8	563.9	563.8
57.5°	503.8	510.3	522.2	516.1	506.2
60°	454.0	454.2	458.5	451.6	450.3
62.5°	398.6	400.5	401.5	392.9	406.8
65°	342.2	337.6	350.9	337.5	339.7
67.5°	290.3	292.6	291.3	282.9	286.1
70°	237.6	240.5	238.4	228.9	231.8
72.5°	189.4	185.9	188.1	176.2	181.7
75°	142.4	139.5	142.1	132.1	136.6
77.5°	97.0	99.2	97.6	92.3	95.4
80°	64.0	62.2	62.2	59.2	59.8
82.5°	37.3	35.6	35.1	34.1	35.6
85°	17.5	17.0	17.3	16.8	16.2
87.5°	6.3	6.5	6.5	6.1	5.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)