

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: P589385

Luminaire Tested: **FMR-24-2-LD4-3LO-35-UNV-82-88-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P589385  
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-LD4-3LO-35-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 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

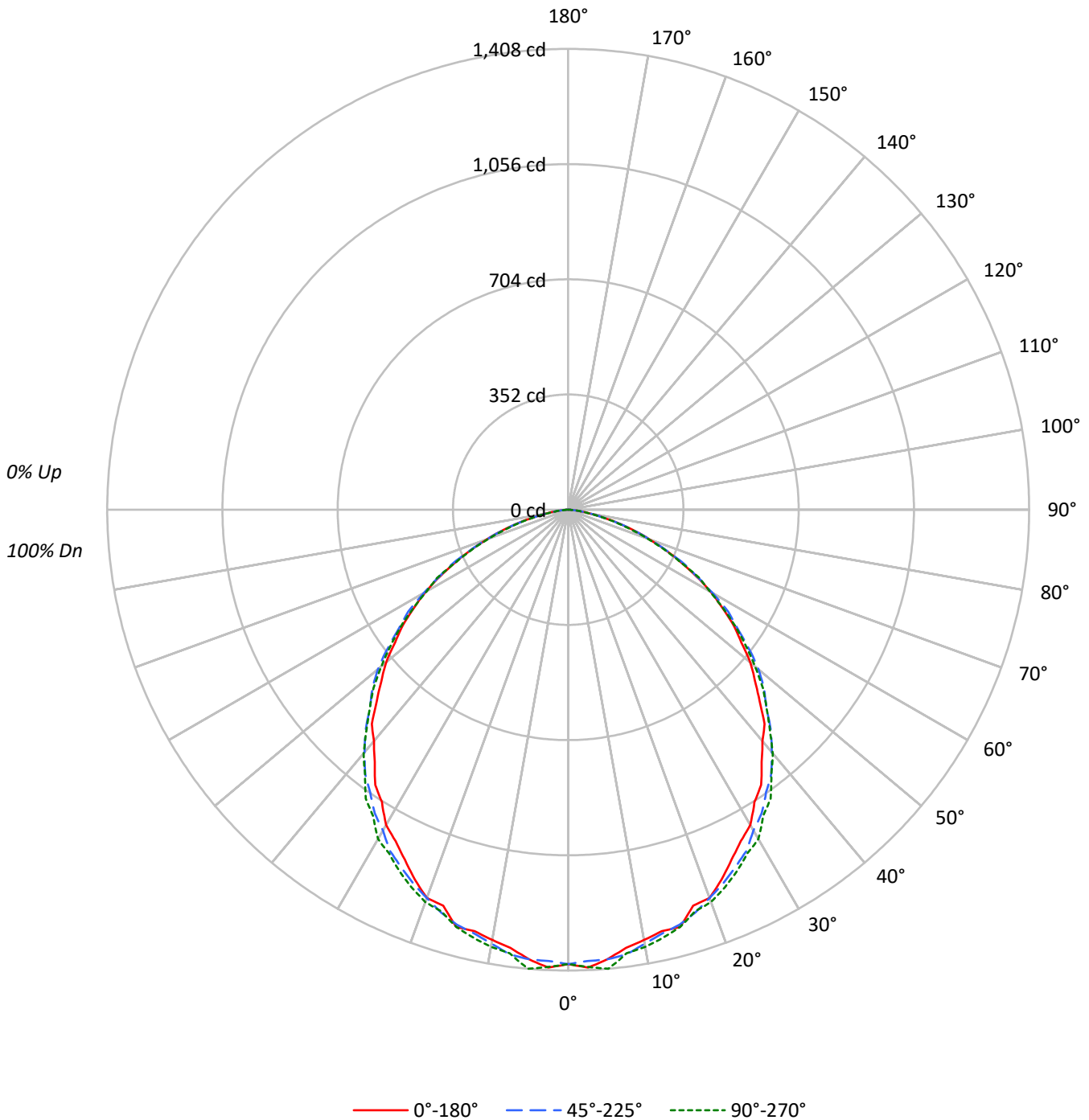
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3499.0 lumens  
Efficiency: N/A  
Efficacy: 99.7 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): 35.1  
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	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°	3736	3736	3736
5°	3724	3725	3803
10°	3648	3680	3706
15°	3677	3657	3677
20°	3615	3615	3653
25°	3504	3580	3620
30°	3456	3516	3610
35°	3374	3462	3540
40°	3243	3399	3414
45°	3145	3257	3261
50°	3041	3179	3118
55°	2898	2954	2933
60°	2710	2737	2688
65°	2416	2478	2399
70°	2073	2080	2022
75°	1642	1639	1575
80°	1100	1069	1027
85°	599	593	553



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	130.6	3.7
10°-20°	370.1	10.6
20°-30°	554.5	15.8
30°-40°	657.2	18.8
40°-50°	658.4	18.8
50°-60°	558.9	16.0
60°-70°	376.8	10.8
70°-80°	165.6	4.7
80°-90°	26.9	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°	1055.2	30.2
0°-40°	1712.4	48.9
0°-60°	2929.7	83.7
0°-90°	3499.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3499.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1388	1388	1388	1388	1388	
5°	1378	1375	1379	1375	1408	130
15°	1320	1305	1313	1320	1320	368
25°	1180	1186	1206	1222	1219	546
35°	1027	1030	1054	1078	1078	638
45°	826	842	856	878	857	639
55°	618	614	630	625	625	549
65°	380	374	389	374	377	377
75°	158	155	158	146	152	169
85°	19	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°	1388.3	1388.3	1388.3	1388.3	1388.3
2.5°	1400.3	1389.7	1379.9	1391.4	1398.4
5°	1378.5	1375.2	1379.0	1374.9	1408.0
7.5°	1350.1	1362.5	1369.7	1365.2	1367.2
10°	1335.1	1330.8	1346.7	1357.8	1356.2
12.5°	1318.9	1325.4	1326.3	1338.3	1339.4
15°	1319.8	1304.6	1312.7	1319.5	1320.0
17.5°	1268.6	1285.1	1290.6	1306.2	1286.9
20°	1262.3	1250.3	1262.3	1278.3	1275.7
22.5°	1223.8	1210.3	1236.1	1250.3	1249.4
25°	1180.0	1186.5	1205.8	1221.6	1219.1
27.5°	1141.7	1149.2	1176.8	1198.5	1184.5
30°	1112.1	1108.3	1131.6	1151.0	1161.7
32.5°	1059.2	1072.8	1100.1	1119.3	1109.0
35°	1027.1	1030.2	1054.0	1078.4	1077.7
37.5°	971.0	985.2	1018.7	1025.5	1019.2
40°	923.2	937.3	967.6	975.0	971.9
42.5°	887.8	890.3	916.3	924.8	911.3
45°	826.4	841.8	855.8	877.8	857.0
47.5°	774.0	781.2	811.3	817.2	806.3
50°	726.5	729.0	759.3	752.0	744.8
52.5°	666.8	677.4	694.4	693.0	684.6
55°	617.7	613.6	629.7	625.4	625.2
57.5°	558.7	565.9	579.2	572.4	561.4
60°	503.5	503.7	508.5	500.8	499.4
62.5°	442.0	444.2	445.3	435.8	451.2
65°	379.5	374.5	389.2	374.3	376.8
67.5°	321.9	324.4	323.0	313.7	317.3
70°	263.5	266.7	264.4	253.8	257.0
72.5°	210.1	206.1	208.7	195.4	201.5
75°	157.9	154.7	157.6	146.4	151.5
77.5°	107.6	110.1	108.3	102.4	105.8
80°	71.0	69.0	69.0	65.6	66.3
82.5°	41.4	39.4	38.9	37.8	39.4
85°	19.4	18.8	19.2	18.6	17.9
87.5°	7.0	7.2	7.2	6.8	6.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)