

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: P589081

Luminaire Tested: **FMR-24-2-LD4-2LO-35-UNV-80-88-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P589081  
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-LD4-2LO-35-UNV-80-88-EDD  
Description: 2X2 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

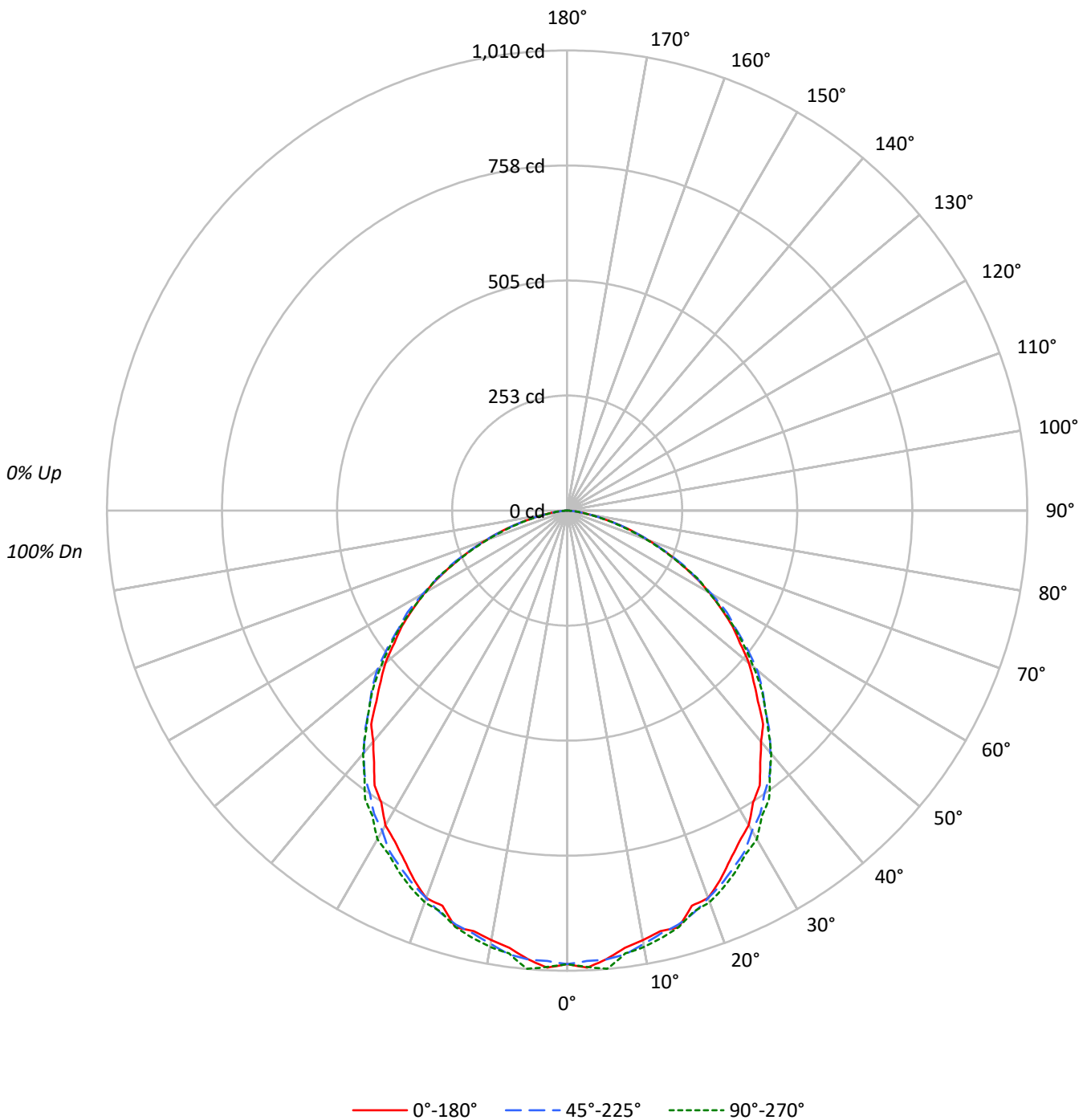
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2509.0 lumens  
Efficiency: N/A  
Efficacy: 107.2 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): 23.4  
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°	2679	2679	2679
5°	2670	2671	2727
10°	2616	2639	2657
15°	2637	2622	2637
20°	2592	2592	2620
25°	2512	2567	2596
30°	2478	2521	2588
35°	2419	2483	2539
40°	2325	2437	2448
45°	2255	2335	2339
50°	2181	2280	2236
55°	2078	2118	2103
60°	1943	1963	1927
65°	1733	1777	1720
70°	1486	1492	1450
75°	1177	1175	1129
80°	789	767	738
85°	429	426	398



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	93.6	3.7
10°-20°	265.4	10.6
20°-30°	397.6	15.8
30°-40°	471.3	18.8
40°-50°	472.1	18.8
50°-60°	400.8	16.0
60°-70°	270.2	10.8
70°-80°	118.7	4.7
80°-90°	19.3	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°	756.6	30.2
0°-40°	1227.9	48.9
0°-60°	2100.8	83.7
0°-90°	2509.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2509.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	996	996	996	996	996	
5°	988	986	989	986	1010	93
15°	946	936	941	946	946	264
25°	846	851	865	876	874	391
35°	736	739	756	773	773	457
45°	592	604	614	629	614	458
55°	443	440	452	448	448	394
65°	272	268	279	268	270	271
75°	113	111	113	105	109	121
85°	14	14	14	13	13	20
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	995.5	995.5	995.5	995.5	995.5
2.5°	1004.1	996.5	989.5	997.7	1002.7
5°	988.4	986.1	988.8	985.9	1009.6
7.5°	968.1	977.0	982.1	978.9	980.3
10°	957.3	954.2	965.7	973.7	972.5
12.5°	945.8	950.4	951.0	959.6	960.4
15°	946.4	935.5	941.3	946.2	946.5
17.5°	909.6	921.5	925.5	936.6	922.8
20°	905.1	896.5	905.1	916.6	914.8
22.5°	877.5	867.9	886.4	896.5	895.9
25°	846.1	850.8	864.7	876.0	874.2
27.5°	818.6	824.0	843.8	859.4	849.4
30°	797.4	794.7	811.4	825.3	833.0
32.5°	759.5	769.3	788.8	802.6	795.2
35°	736.5	738.7	755.8	773.3	772.8
37.5°	696.3	706.4	730.5	735.4	730.9
40°	662.0	672.1	693.8	699.1	696.9
42.5°	636.6	638.4	657.1	663.1	653.5
45°	592.5	603.6	613.6	629.4	614.5
47.5°	555.0	560.2	581.8	586.0	578.2
50°	521.0	522.8	544.5	539.2	534.1
52.5°	478.2	485.7	497.9	496.9	490.9
55°	442.9	440.0	451.5	448.5	448.3
57.5°	400.6	405.8	415.3	410.4	402.6
60°	361.1	361.2	364.7	359.1	358.1
62.5°	317.0	318.5	319.3	312.5	323.5
65°	272.1	268.5	279.1	268.4	270.2
67.5°	230.8	232.6	231.6	224.9	227.5
70°	188.9	191.3	189.6	182.0	184.3
72.5°	150.6	147.8	149.6	140.1	144.5
75°	113.2	110.9	113.0	105.0	108.6
77.5°	77.1	78.9	77.6	73.4	75.8
80°	50.9	49.5	49.5	47.0	47.6
82.5°	29.7	28.3	27.9	27.1	28.3
85°	13.9	13.5	13.8	13.4	12.9
87.5°	5.0	5.1	5.1	4.9	4.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)