

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: P588930

Luminaire Tested: **FMR-24-2-LD4-1STD-40-UNV-81-94-EDD**

Issue Date: 12/8/2021



**Test Information**

Test Method: LM-79-08  
Report Number: P588930  
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-LD4-1STD-40-UNV-81-94-EDD  
Description: 2X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR  
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

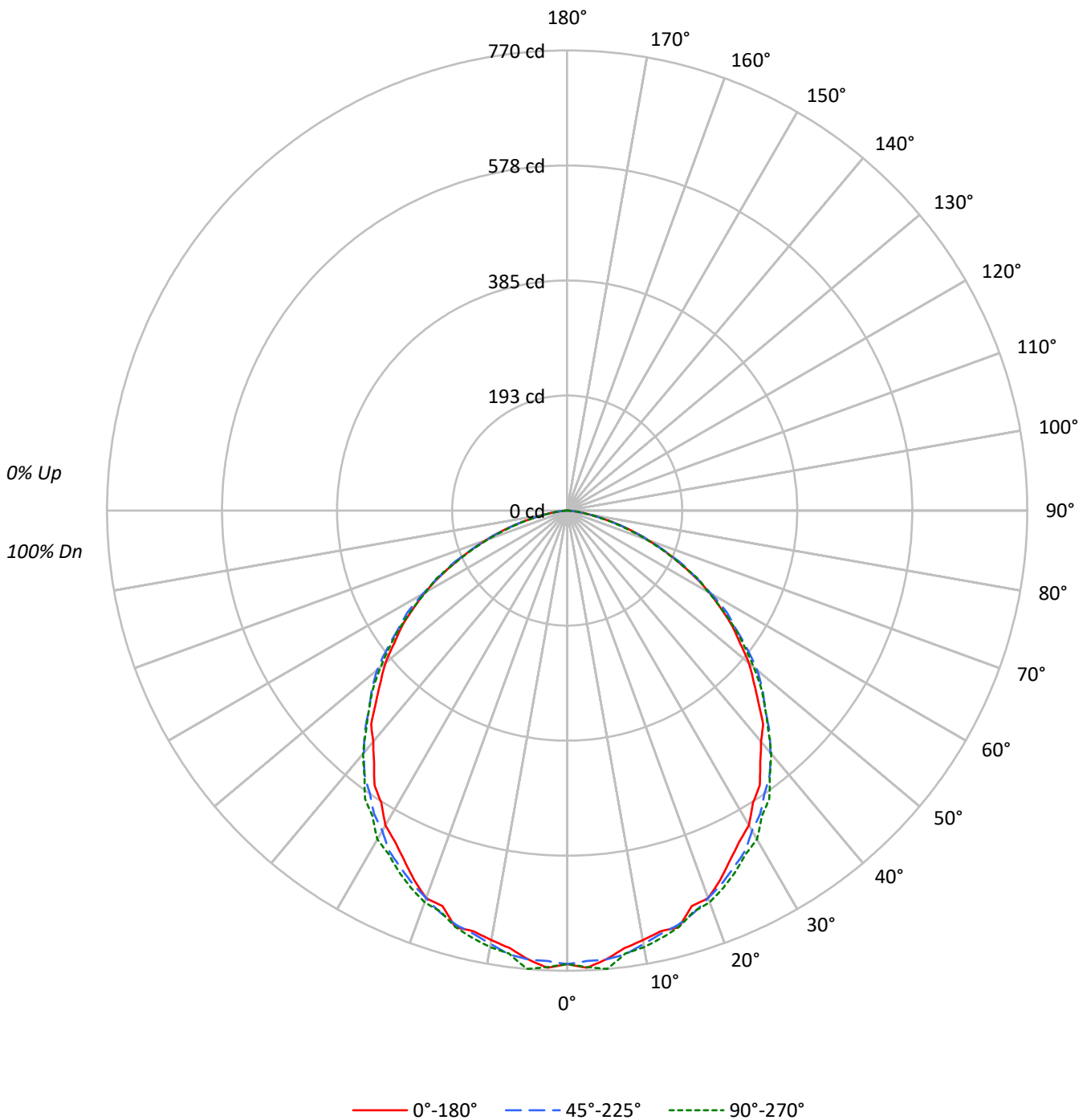
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1913.0 lumens  
Efficiency: N/A  
Efficacy: 115.2 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): 16.6  
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°	2042	2042	2042
5°	2036	2036	2079
10°	1994	2012	2026
15°	2010	1999	2011
20°	1976	1976	1997
25°	1916	1958	1979
30°	1889	1922	1974
35°	1845	1893	1936
40°	1773	1858	1867
45°	1719	1781	1783
50°	1663	1738	1705
55°	1584	1615	1604
60°	1482	1496	1469
65°	1321	1355	1312
70°	1134	1138	1105
75°	897	895	861
80°	601	584	563
85°	327	324	303



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	71.4	3.7
10°-20°	202.4	10.6
20°-30°	303.2	15.8
30°-40°	359.3	18.8
40°-50°	360.0	18.8
50°-60°	305.6	16.0
60°-70°	206.0	10.8
70°-80°	90.5	4.7
80°-90°	14.7	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°	576.9	30.2
0°-40°	936.2	48.9
0°-60°	1601.8	83.7
0°-90°	1913.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1913.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	759	759	759	759	759	
5°	754	752	754	752	770	71
15°	722	713	718	721	722	201
25°	645	649	659	668	666	298
35°	562	563	576	590	589	349
45°	452	460	468	480	469	349
55°	338	336	344	342	342	300
65°	208	205	213	205	206	206
75°	86	85	86	80	83	93
85°	11	10	10	10	10	15
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	759.0	759.0	759.0	759.0	759.0
2.5°	765.6	759.8	754.4	760.7	764.5
5°	753.6	751.9	753.9	751.7	769.8
7.5°	738.2	744.9	748.8	746.4	747.5
10°	729.9	727.6	736.3	742.4	741.5
12.5°	721.1	724.6	725.1	731.7	732.3
15°	721.6	713.3	717.7	721.4	721.7
17.5°	693.6	702.6	705.6	714.1	703.6
20°	690.1	683.6	690.1	698.9	697.5
22.5°	669.1	661.7	675.8	683.6	683.1
25°	645.2	648.7	659.3	667.9	666.5
27.5°	624.2	628.3	643.4	655.2	647.6
30°	608.0	606.0	618.7	629.3	635.2
32.5°	579.1	586.5	601.4	611.9	606.3
35°	561.6	563.2	576.3	589.6	589.2
37.5°	530.9	538.6	556.9	560.7	557.2
40°	504.7	512.5	529.0	533.0	531.4
42.5°	485.4	486.8	501.0	505.6	498.2
45°	451.8	460.2	467.9	479.9	468.6
47.5°	423.2	427.1	443.6	446.8	440.8
50°	397.2	398.6	415.1	411.1	407.2
52.5°	364.6	370.4	379.7	378.9	374.3
55°	337.7	335.5	344.3	341.9	341.8
57.5°	305.5	309.4	316.6	312.9	306.9
60°	275.3	275.4	278.0	273.8	273.0
62.5°	241.7	242.9	243.4	238.2	246.7
65°	207.5	204.7	212.8	204.6	206.0
67.5°	176.0	177.4	176.6	171.5	173.5
70°	144.1	145.8	144.6	138.8	140.5
72.5°	114.9	112.7	114.1	106.8	110.2
75°	86.3	84.6	86.1	80.1	82.8
77.5°	58.8	60.2	59.2	56.0	57.8
80°	38.8	37.7	37.7	35.9	36.3
82.5°	22.6	21.6	21.3	20.7	21.6
85°	10.6	10.3	10.5	10.2	9.8
87.5°	3.8	3.9	3.9	3.7	3.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)