

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: P588928

Luminaire Tested: **FMR-24-2-LD4-1STD-40-UNV-81-87-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P588928
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-81-87-EDD
Description: 2X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

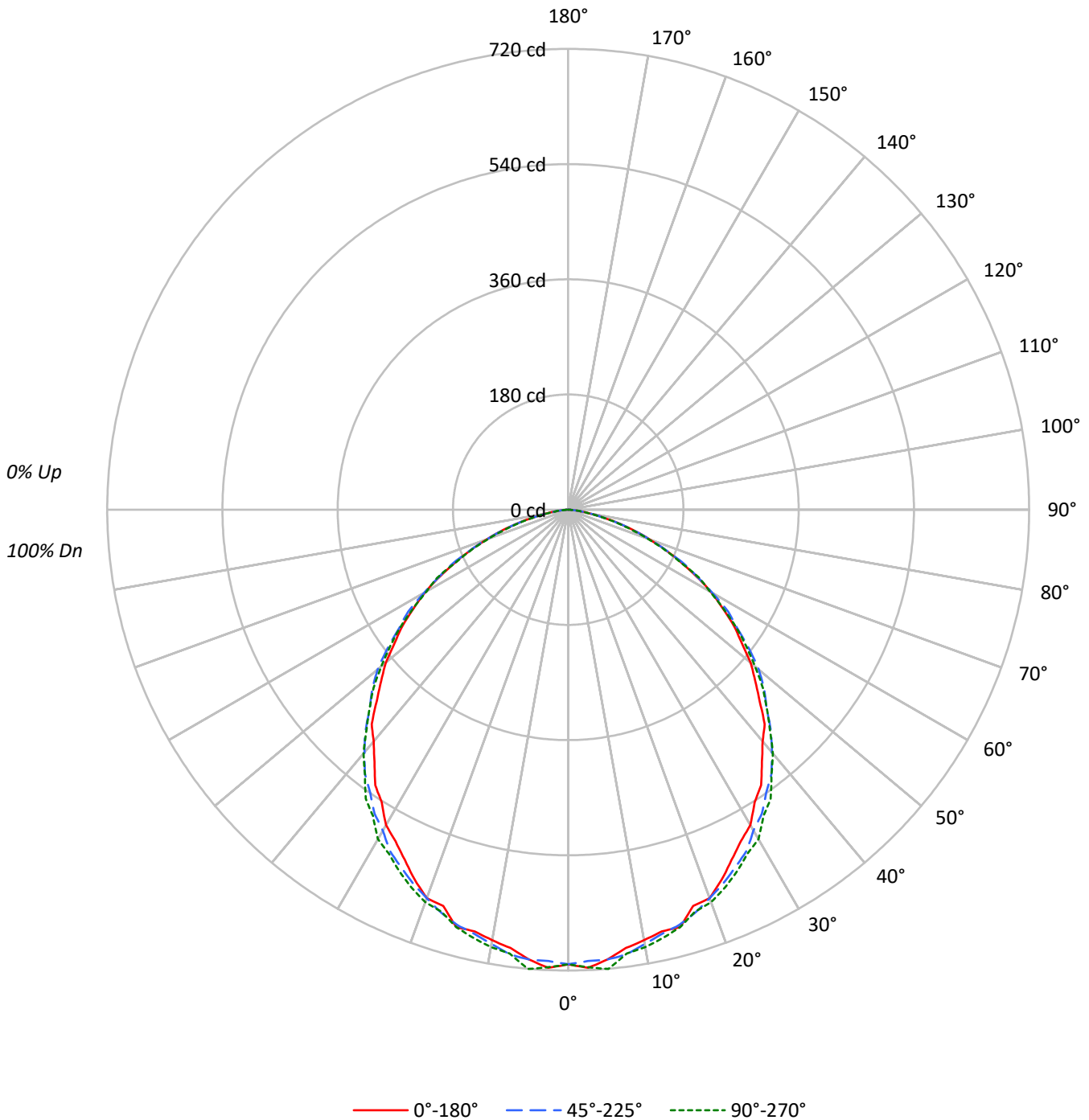
Lumens per Lamp: N/A
Luminaire Lumens: 1790.0 lumens
Efficiency: N/A
Efficacy: 107.8 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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°	1911	1911	1911
5°	1905	1906	1946
10°	1866	1883	1896
15°	1881	1871	1881
20°	1849	1849	1869
25°	1792	1832	1852
30°	1768	1799	1847
35°	1726	1771	1811
40°	1659	1739	1747
45°	1609	1666	1668
50°	1556	1626	1595
55°	1483	1511	1501
60°	1386	1400	1375
65°	1236	1268	1228
70°	1061	1065	1035
75°	840	838	806
80°	563	547	525
85°	306	303	284



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	66.8	3.7
10°-20°	189.3	10.6
20°-30°	283.7	15.8
30°-40°	336.2	18.8
40°-50°	336.8	18.8
50°-60°	285.9	16.0
60°-70°	192.8	10.8
70°-80°	84.7	4.7
80°-90°	13.8	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°	539.8	30.2
0°-40°	876.0	48.9
0°-60°	1498.8	83.7
0°-90°	1790.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1790.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	710	710	710	710	710	
5°	705	704	706	703	720	66
15°	675	667	672	675	675	188
25°	604	607	617	625	624	279
35°	525	527	539	552	551	326
45°	423	431	438	449	438	327
55°	316	314	322	320	320	281
65°	194	192	199	192	193	193
75°	81	79	81	75	78	87
85°	10	10	10	10	9	14
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	710.2	710.2	710.2	710.2	710.2
2.5°	716.4	711.0	705.9	711.8	715.4
5°	705.2	703.5	705.5	703.3	720.3
7.5°	690.7	697.0	700.7	698.4	699.4
10°	683.0	680.8	689.0	694.6	693.8
12.5°	674.7	678.0	678.5	684.6	685.2
15°	675.2	667.4	671.5	675.0	675.3
17.5°	649.0	657.4	660.2	668.2	658.3
20°	645.8	639.6	645.8	653.9	652.6
22.5°	626.0	619.2	632.4	639.6	639.2
25°	603.7	607.0	616.9	624.9	623.7
27.5°	584.0	587.9	602.0	613.1	606.0
30°	568.9	567.0	578.9	588.8	594.3
32.5°	541.9	548.8	562.8	572.6	567.4
35°	525.4	527.0	539.2	551.7	551.3
37.5°	496.7	504.0	521.1	524.6	521.4
40°	472.3	479.5	495.0	498.8	497.2
42.5°	454.2	455.5	468.8	473.1	466.2
45°	422.7	430.6	437.8	449.1	438.4
47.5°	396.0	399.6	415.0	418.1	412.5
50°	371.7	372.9	388.4	384.7	381.0
52.5°	341.1	346.5	355.3	354.5	350.2
55°	316.0	313.9	322.1	319.9	319.9
57.5°	285.8	289.5	296.3	292.8	287.2
60°	257.6	257.7	260.2	256.2	255.5
62.5°	226.1	227.2	227.8	222.9	230.8
65°	194.1	191.6	199.1	191.5	192.8
67.5°	164.7	166.0	165.2	160.5	162.3
70°	134.8	136.5	135.3	129.8	131.5
72.5°	107.5	105.5	106.7	100.0	103.1
75°	80.8	79.1	80.6	74.9	77.5
77.5°	55.0	56.3	55.4	52.4	54.1
80°	36.3	35.3	35.3	33.6	33.9
82.5°	21.2	20.2	19.9	19.3	20.2
85°	9.9	9.6	9.8	9.5	9.2
87.5°	3.6	3.7	3.7	3.5	3.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)