

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: P547095

Luminaire Tested: **FMR-24-4-LD4-3LO-40-UNV-80-84-EDD**

Issue Date: 6/15/2021

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.



Test Information

Test Method: LM-79-08
Report Number: P547095
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-5)
Test Lab: INNOVATION CENTER
Issue Date: 6/15/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FMR-24-4-LD4-3LO-40-UNV-80-84-EDD
Description: 2X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

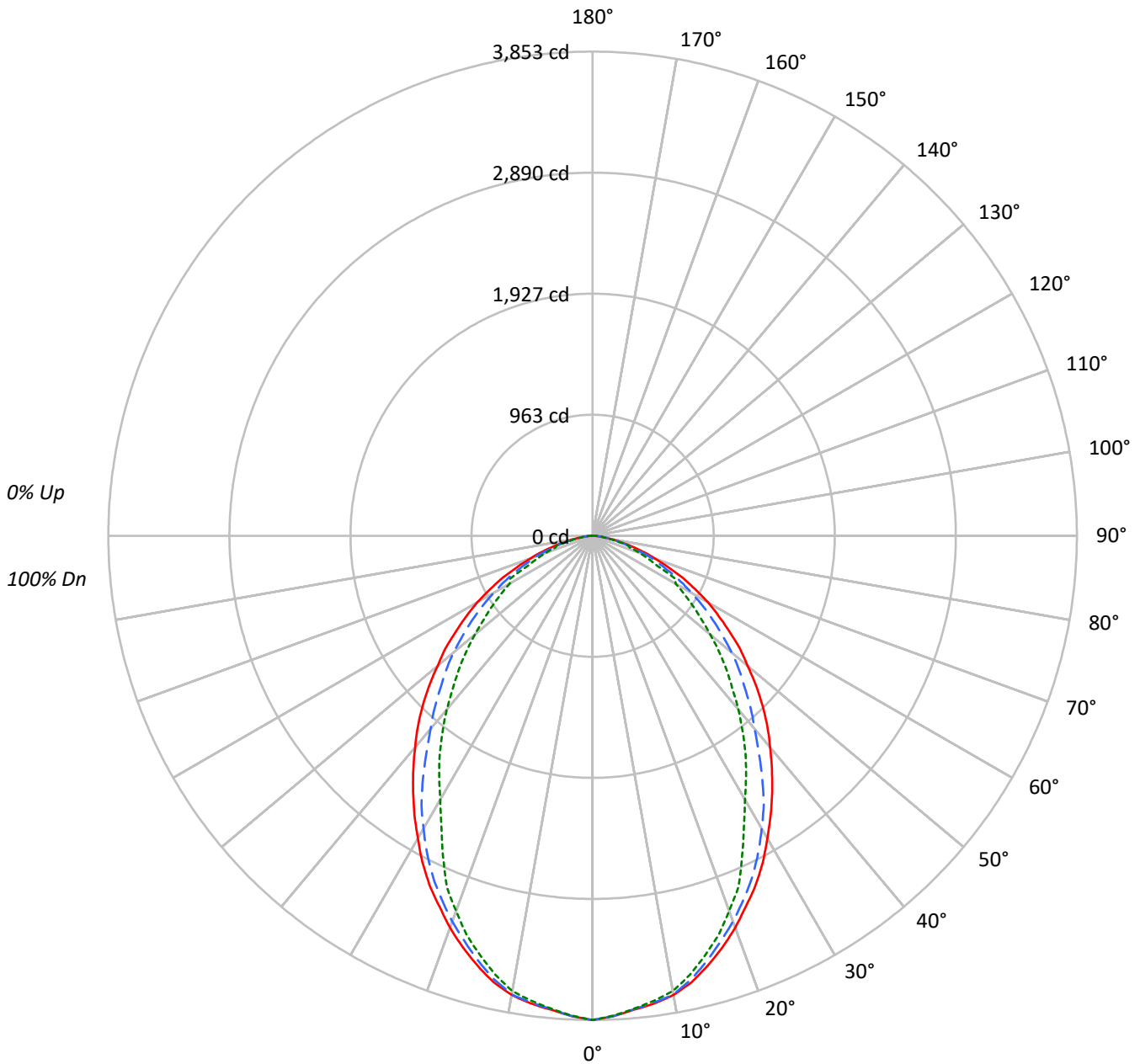
Lumens per Lamp: N/A
Luminaire Lumens: 7564.0 lumens
Efficiency: N/A
Efficacy: 107.7 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 70.2
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				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	0	
RCR																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				100
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87				87
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75				75
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65				65
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56				56
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50				50
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44				44
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40				40
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36				36
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33				33
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30				30

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5184	5184	5184
5°	5114	5108	5102
10°	5069	5063	5027
15°	4933	4883	4815
20°	4752	4675	4547
25°	4556	4457	4179
30°	4318	4180	3765
35°	4090	3863	3483
40°	3857	3521	3169
45°	3636	3255	2865
50°	3366	3021	2555
55°	3114	2738	2288
60°	2853	2445	2050
65°	2510	2141	1815
70°	2068	1875	1542
75°	1644	1436	1505
80°	1104	1035	966
85°	687	826	963



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	358.7	4.7
10°-20°	984.3	13.0
20°-30°	1362.7	18.0
30°-40°	1453.1	19.2
40°-50°	1325.6	17.5
50°-60°	1038.5	13.7
60°-70°	676.9	8.9
70°-80°	299.9	4.0
80°-90°	64.4	0.9
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°	2705.7	35.8
0°-40°	4158.8	55.0
0°-60°	6522.9	86.2
0°-90°	7564.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7564.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3853	3853	3853	3853	3853	
5°	3786	3782	3782	3777	3777	359
15°	3541	3541	3506	3470	3457	996
25°	3069	3051	3002	2895	2815	1409
35°	2490	2472	2352	2174	2120	1557
45°	1911	1871	1710	1568	1506	1472
55°	1327	1287	1167	1029	976	1191
65°	788	744	673	686	570	777
75°	316	294	276	263	290	339
85°	44	49	54	58	62	62
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3853.0	3853.0	3853.0	3853.0	3853.0
2.5°	3826.3	3826.3	3826.3	3821.8	3821.8
5°	3786.2	3781.7	3781.7	3777.3	3777.3
7.5°	3755.0	3750.6	3746.1	3741.6	3732.7
10°	3710.5	3710.5	3706.0	3683.7	3679.3
12.5°	3639.2	3634.7	3616.9	3585.7	3576.8
15°	3541.2	3541.2	3505.6	3469.9	3456.6
17.5°	3434.3	3429.8	3385.3	3349.7	3331.8
20°	3318.5	3309.6	3265.0	3207.1	3175.9
22.5°	3189.3	3189.3	3135.9	3060.1	3028.9
25°	3069.0	3051.2	3002.2	2895.3	2815.1
27.5°	2931.0	2904.2	2850.8	2699.3	2605.8
30°	2779.5	2766.1	2690.4	2494.4	2423.2
32.5°	2637.0	2614.7	2534.5	2329.6	2271.7
35°	2490.0	2472.2	2351.9	2173.7	2120.3
37.5°	2343.0	2320.7	2169.3	2026.7	1959.9
40°	2196.0	2169.3	2004.5	1875.3	1804.0
42.5°	2057.9	2022.3	1861.9	1723.8	1643.6
45°	1910.9	1870.8	1710.5	1567.9	1505.6
47.5°	1763.9	1728.3	1581.3	1434.3	1363.0
50°	1608.0	1576.8	1443.2	1296.2	1220.5
52.5°	1478.8	1429.8	1300.7	1153.7	1091.3
55°	1327.4	1287.3	1167.0	1029.0	975.5
57.5°	1189.3	1149.2	1037.9	908.7	864.1
60°	1060.1	1002.2	908.7	797.3	761.7
62.5°	917.6	873.0	792.9	699.3	743.9
65°	788.4	743.9	672.6	686.0	570.2
67.5°	645.9	623.6	561.2	498.9	481.1
70°	525.6	498.9	476.6	409.8	392.0
72.5°	418.7	392.0	360.8	325.2	311.8
75°	316.3	294.0	276.2	262.8	289.5
77.5°	218.3	209.4	196.0	182.6	178.2
80°	142.5	138.1	133.6	129.2	124.7
82.5°	84.6	84.6	84.6	84.6	84.6
85°	44.5	49.0	53.5	57.9	62.4
87.5°	26.7	26.7	31.2	35.6	40.1
90°	0.0	0.0	0.0	0.0	0.0



Report Generated By 670246072 / DESKTOP-MV3F9LC





— 0°-180° - - 45°-225° - - - - 90°-270°







(END OF REPORT)