

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: P546298

Luminaire Tested: **FMR-12-4-LD4-2STD-35-UNV-80-87-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: P546298
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-12-4-LD4-2STD-35-UNV-80-87-EDD
Description: 1X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

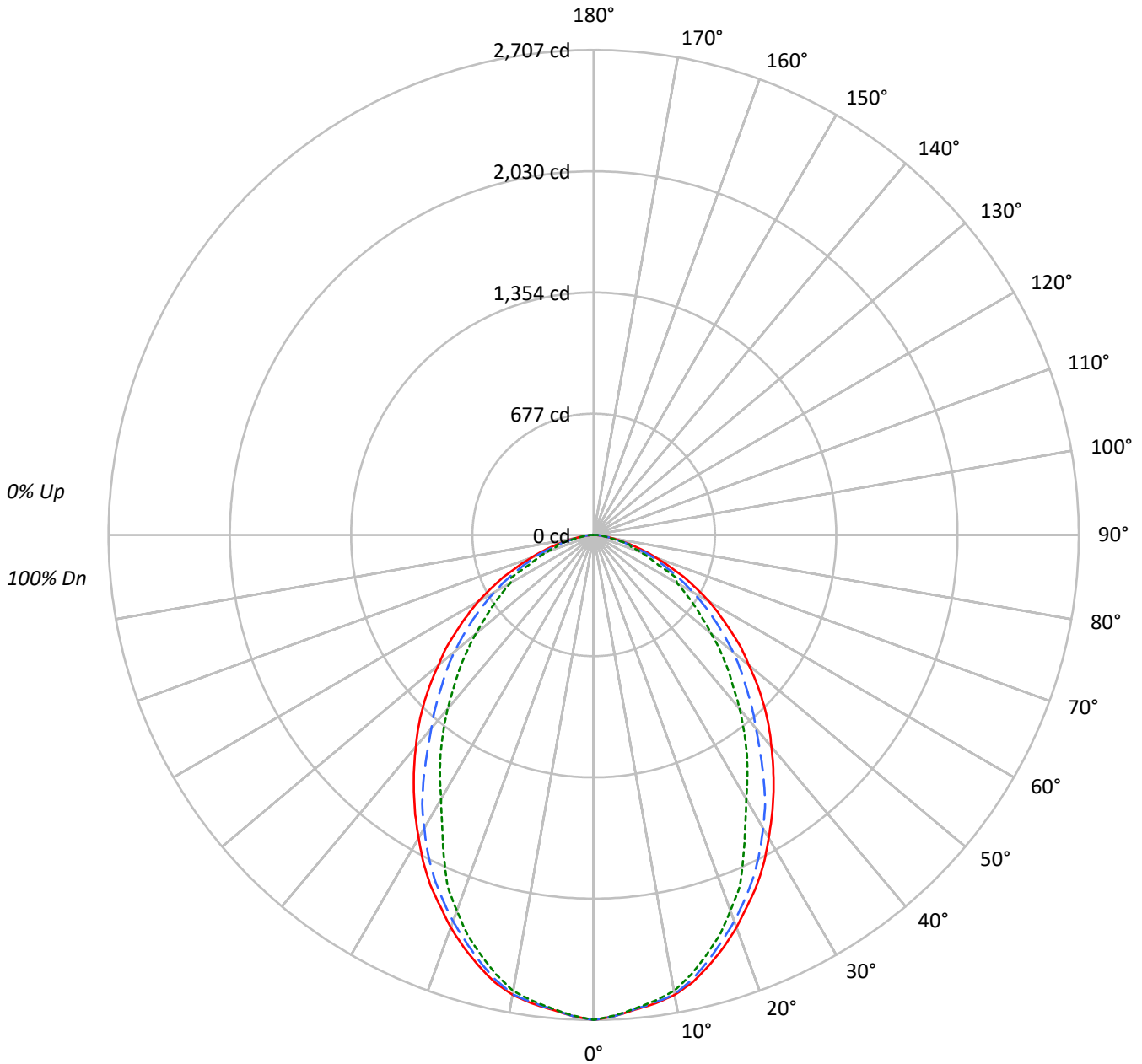
Lumens per Lamp: N/A
Luminaire Lumens: 5314.0 lumens
Efficiency: N/A
Efficacy: 79.8 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 66.6
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

TEST NUMBER: P546298

CATALOG NUMBER: FMR-12-4-LD4-2STD-35-UNV-80-87-EDD

Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
RC	80									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																			
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87																			
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75																			
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65																			
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56																			
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50																			
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44																			
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40																			
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36																			
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33																			
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30																			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7284	7284	7284
5°	7185	7177	7168
10°	7123	7114	7063
15°	6931	6861	6765
20°	6676	6569	6389
25°	6402	6263	5872
30°	6068	5873	5290
35°	5747	5428	4893
40°	5420	4947	4452
45°	5109	4573	4025
50°	4729	4245	3589
55°	4375	3847	3215
60°	4008	3436	2880
65°	3527	3009	2551
70°	2906	2634	2167
75°	2310	2017	2115
80°	1551	1455	1358
85°	966	1161	1352



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	252.0	4.7
10°-20°	691.5	13.0
20°-30°	957.4	18.0
30°-40°	1020.8	19.2
40°-50°	931.3	17.5
50°-60°	729.6	13.7
60°-70°	475.5	8.9
70°-80°	210.7	4.0
80°-90°	45.2	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°	1900.9	35.8
0°-40°	2921.7	55.0
0°-60°	4582.6	86.2
0°-90°	5314.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5314.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2707	2707	2707	2707	2707	
5°	2660	2657	2657	2654	2654	252
15°	2488	2488	2463	2438	2428	699
25°	2156	2144	2109	2034	1978	990
35°	1749	1737	1652	1527	1490	1094
45°	1342	1314	1202	1102	1058	1034
55°	932	904	820	723	685	836
65°	554	523	472	482	401	546
75°	222	206	194	185	203	238
85°	31	34	38	41	44	43
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2706.9	2706.9	2706.9	2706.9	2706.9
2.5°	2688.1	2688.1	2688.1	2685.0	2685.0
5°	2659.9	2656.8	2656.8	2653.7	2653.7
7.5°	2638.0	2634.9	2631.8	2628.6	2622.4
10°	2606.7	2606.7	2603.6	2588.0	2584.8
12.5°	2556.7	2553.5	2541.0	2519.1	2512.9
15°	2487.8	2487.8	2462.8	2437.8	2428.4
17.5°	2412.7	2409.6	2378.3	2353.3	2340.7
20°	2331.4	2325.1	2293.8	2253.1	2231.2
22.5°	2240.6	2240.6	2203.1	2149.9	2128.0
25°	2156.1	2143.6	2109.2	2034.1	1977.7
27.5°	2059.1	2040.3	2002.8	1896.4	1830.7
30°	1952.7	1943.3	1890.1	1752.4	1702.4
32.5°	1852.6	1836.9	1780.6	1636.6	1596.0
35°	1749.3	1736.8	1652.3	1527.1	1489.6
37.5°	1646.0	1630.4	1524.0	1423.9	1376.9
40°	1542.8	1524.0	1408.2	1317.5	1267.4
42.5°	1445.8	1420.7	1308.1	1211.1	1154.7
45°	1342.5	1314.3	1201.7	1101.5	1057.7
47.5°	1239.2	1214.2	1110.9	1007.6	957.6
50°	1129.7	1107.8	1013.9	910.6	857.4
52.5°	1038.9	1004.5	913.8	810.5	766.7
55°	932.5	904.4	819.9	722.9	685.3
57.5°	835.5	807.4	729.1	638.4	607.1
60°	744.8	704.1	638.4	560.2	535.1
62.5°	644.6	613.4	557.0	491.3	522.6
65°	553.9	522.6	472.5	481.9	400.6
67.5°	453.8	438.1	394.3	350.5	338.0
70°	369.3	350.5	334.8	287.9	275.4
72.5°	294.2	275.4	253.5	228.4	219.1
75°	222.2	206.5	194.0	184.6	203.4
77.5°	153.3	147.1	137.7	128.3	125.2
80°	100.1	97.0	93.9	90.8	87.6
82.5°	59.5	59.5	59.5	59.5	59.5
85°	31.3	34.4	37.6	40.7	43.8
87.5°	18.8	18.8	21.9	25.0	28.2
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)