

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: P545459

Luminaire Tested: **FMR-12-2-LD4-1STD-35-UNV-93-88-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: P545459
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-12-2-LD4-1STD-35-UNV-93-88-EDD
Description: 1X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

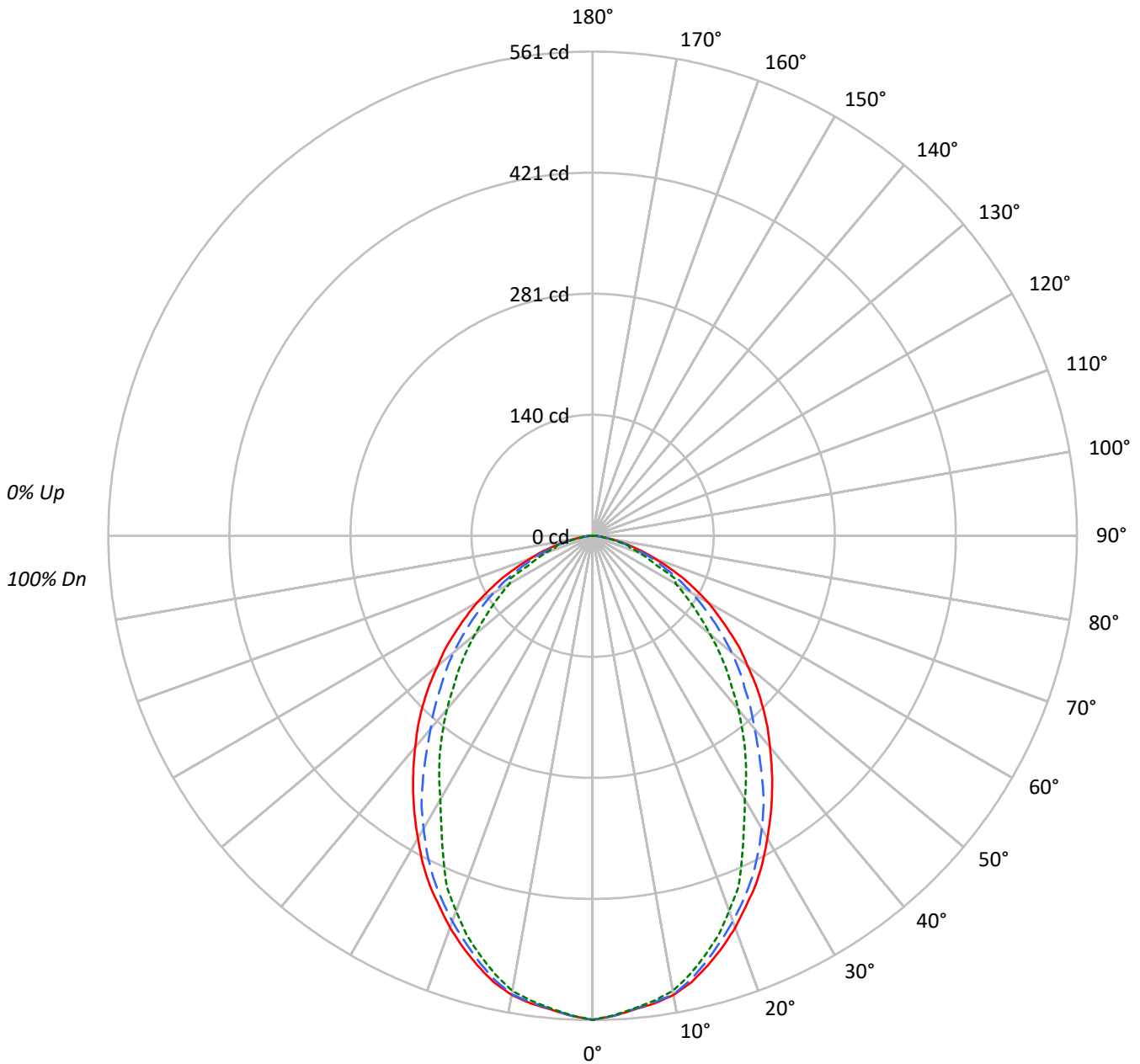
Lumens per Lamp: N/A
Luminaire Lumens: 1101.0 lumens
Efficiency: N/A
Efficacy: 66.3 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

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									
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°	3018	3018	3018
5°	2977	2974	2970
10°	2952	2948	2926
15°	2872	2843	2803
20°	2766	2722	2648
25°	2653	2595	2434
30°	2514	2434	2192
35°	2381	2249	2028
40°	2245	2050	1845
45°	2117	1895	1668
50°	1960	1759	1488
55°	1813	1594	1332
60°	1661	1424	1194
65°	1462	1247	1057
70°	1204	1092	899
75°	957	836	875
80°	642	604	564
85°	401	482	562



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	52.2	4.7
10°-20°	143.3	13.0
20°-30°	198.4	18.0
30°-40°	211.5	19.2
40°-50°	193.0	17.5
50°-60°	151.2	13.7
60°-70°	98.5	8.9
70°-80°	43.7	4.0
80°-90°	9.4	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°	393.8	35.8
0°-40°	605.3	55.0
0°-60°	949.5	86.2
0°-90°	1101.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1101.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	561	561	561	561	561	
5°	551	550	550	550	550	52
15°	515	515	510	505	503	145
25°	447	444	437	421	410	205
35°	362	360	342	316	309	227
45°	278	272	249	228	219	214
55°	193	187	170	150	142	173
65°	115	108	98	100	83	113
75°	46	43	40	38	42	49
85°	6	7	8	8	9	9
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	560.8	560.8	560.8	560.8	560.8
2.5°	556.9	556.9	556.9	556.3	556.3
5°	551.1	550.5	550.5	549.8	549.8
7.5°	546.6	545.9	545.3	544.6	543.3
10°	540.1	540.1	539.4	536.2	535.5
12.5°	529.7	529.1	526.5	521.9	520.6
15°	515.4	515.4	510.3	505.1	503.1
17.5°	499.9	499.2	492.8	487.6	485.0
20°	483.0	481.7	475.3	466.8	462.3
22.5°	464.2	464.2	456.4	445.4	440.9
25°	446.7	444.1	437.0	421.4	409.8
27.5°	426.6	422.7	415.0	392.9	379.3
30°	404.6	402.6	391.6	363.1	352.7
32.5°	383.8	380.6	368.9	339.1	330.7
35°	362.4	359.8	342.3	316.4	308.6
37.5°	341.0	337.8	315.8	295.0	285.3
40°	319.6	315.8	291.8	273.0	262.6
42.5°	299.5	294.4	271.0	250.9	239.2
45°	278.1	272.3	249.0	228.2	219.1
47.5°	256.8	251.6	230.2	208.8	198.4
50°	234.1	229.5	210.1	188.7	177.7
52.5°	215.3	208.1	189.3	167.9	158.8
55°	193.2	187.4	169.9	149.8	142.0
57.5°	173.1	167.3	151.1	132.3	125.8
60°	154.3	145.9	132.3	116.1	110.9
62.5°	133.6	127.1	115.4	101.8	108.3
65°	114.8	108.3	97.9	99.8	83.0
67.5°	94.0	90.8	81.7	72.6	70.0
70°	76.5	72.6	69.4	59.6	57.1
72.5°	60.9	57.1	52.5	47.3	45.4
75°	46.0	42.8	40.2	38.3	42.1
77.5°	31.8	30.5	28.5	26.6	25.9
80°	20.7	20.1	19.5	18.8	18.2
82.5°	12.3	12.3	12.3	12.3	12.3
85°	6.5	7.1	7.8	8.4	9.1
87.5°	3.9	3.9	4.5	5.2	5.8
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)