

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: P546011

Luminaire Tested: **FMR-12-4-LD4-1STD-35-UNV-80-88-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: P546011
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-LD4-1STD-35-UNV-80-88-EDD
Description: 1X4 FMR TROFFER WITH .125 PRISMATIC ACRYLIC 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

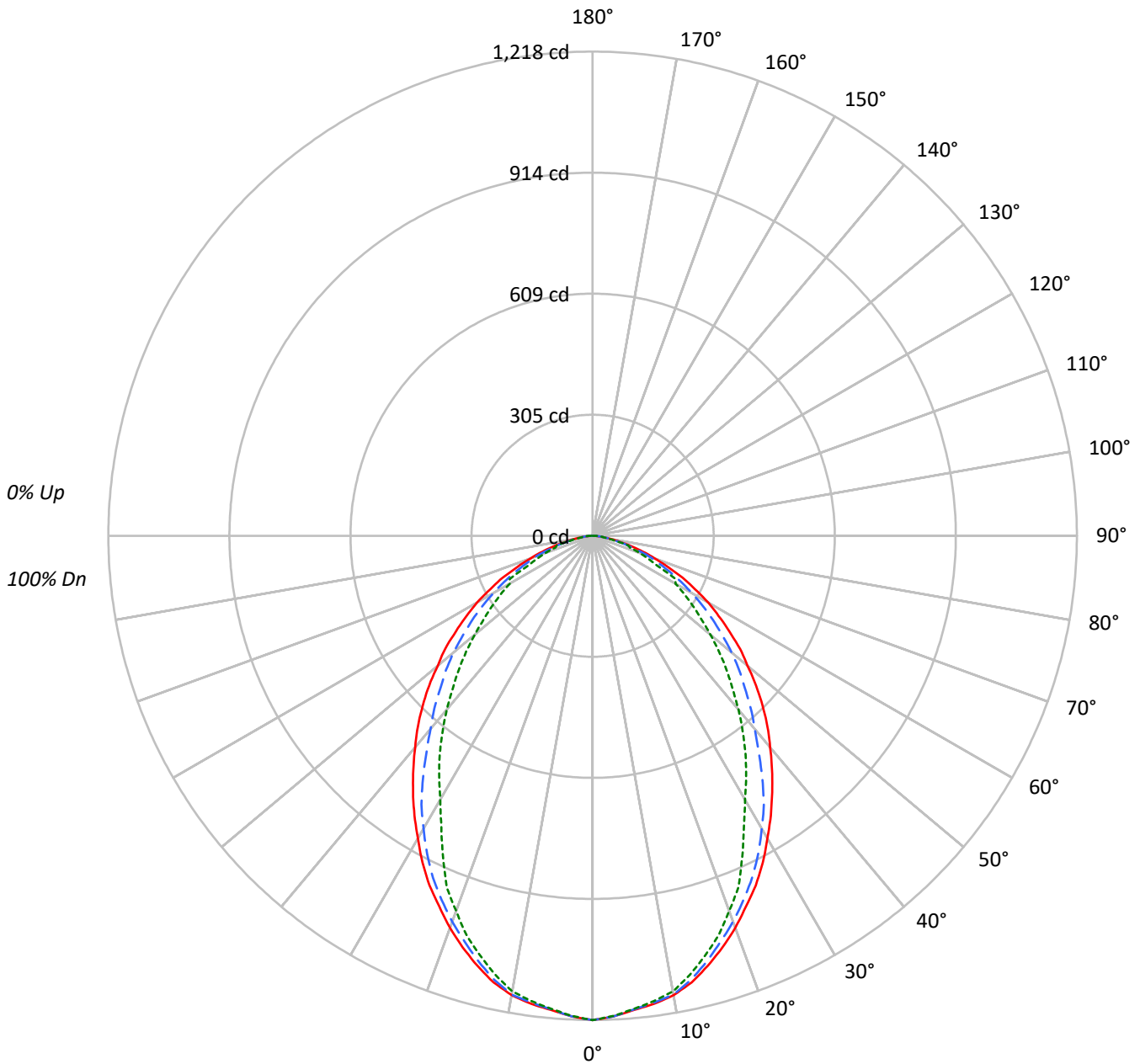
Lumens per Lamp: N/A
Luminaire Lumens: 2392.0 lumens
Efficiency: N/A
Efficacy: 71.8 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 33.3
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°	3279	3279	3279
5°	3234	3230	3227
10°	3206	3202	3179
15°	3120	3088	3045
20°	3005	2957	2876
25°	2882	2819	2643
30°	2731	2644	2381
35°	2587	2443	2203
40°	2439	2227	2004
45°	2300	2058	1812
50°	2129	1911	1616
55°	1970	1732	1447
60°	1805	1547	1297
65°	1587	1354	1148
70°	1308	1186	976
75°	1040	908	952
80°	699	656	611
85°	435	522	608



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	113.4	4.7
10°-20°	311.3	13.0
20°-30°	430.9	18.0
30°-40°	459.5	19.2
40°-50°	419.2	17.5
50°-60°	328.4	13.7
60°-70°	214.0	8.9
70°-80°	94.8	4.0
80°-90°	20.4	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°	855.6	35.8
0°-40°	1315.1	55.0
0°-60°	2062.8	86.2
0°-90°	2392.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2392.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1218	1218	1218	1218	1218	
5°	1197	1196	1196	1194	1194	114
15°	1120	1120	1109	1097	1093	315
25°	970	965	949	916	890	446
35°	787	782	744	687	670	492
45°	604	592	541	496	476	465
55°	420	407	369	325	308	377
65°	249	235	213	217	180	246
75°	100	93	87	83	92	107
85°	14	16	17	18	20	20
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1218.5	1218.5	1218.5	1218.5	1218.5
2.5°	1210.0	1210.0	1210.0	1208.6	1208.6
5°	1197.3	1195.9	1195.9	1194.5	1194.5
7.5°	1187.5	1186.1	1184.6	1183.2	1180.4
10°	1173.4	1173.4	1172.0	1164.9	1163.5
12.5°	1150.8	1149.4	1143.8	1133.9	1131.1
15°	1119.8	1119.8	1108.6	1097.3	1093.1
17.5°	1086.0	1084.6	1070.5	1059.3	1053.6
20°	1049.4	1046.6	1032.5	1014.2	1004.3
22.5°	1008.6	1008.6	991.7	967.7	957.9
25°	970.5	964.9	949.4	915.6	890.2
27.5°	926.9	918.4	901.5	853.6	824.0
30°	879.0	874.8	850.8	788.8	766.3
32.5°	833.9	826.9	801.5	736.7	718.4
35°	787.4	781.8	743.7	687.4	670.5
37.5°	740.9	733.9	686.0	640.9	619.8
40°	694.4	686.0	633.9	593.0	570.5
42.5°	650.8	639.5	588.8	545.1	519.8
45°	604.3	591.6	540.9	495.8	476.1
47.5°	557.8	546.5	500.1	453.6	431.0
50°	508.5	498.7	456.4	409.9	386.0
52.5°	467.7	452.2	411.3	364.8	345.1
55°	419.8	407.1	369.1	325.4	308.5
57.5°	376.1	363.4	328.2	287.4	273.3
60°	335.3	316.9	287.4	252.1	240.9
62.5°	290.2	276.1	250.7	221.2	235.2
65°	249.3	235.2	212.7	216.9	180.3
67.5°	204.2	197.2	177.5	157.8	152.1
70°	166.2	157.8	150.7	129.6	124.0
72.5°	132.4	124.0	114.1	102.8	98.6
75°	100.0	93.0	87.3	83.1	91.6
77.5°	69.0	66.2	62.0	57.8	56.3
80°	45.1	43.7	42.3	40.8	39.4
82.5°	26.8	26.8	26.8	26.8	26.8
85°	14.1	15.5	16.9	18.3	19.7
87.5°	8.5	8.5	9.9	11.3	12.7
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)