

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: P545189

Luminaire Tested: **FMR-12-1-LD4-2STD-40-UNV-81-96-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: P545189
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-12-1-LD4-2STD-40-UNV-81-96-EDD
Description: 1X1 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

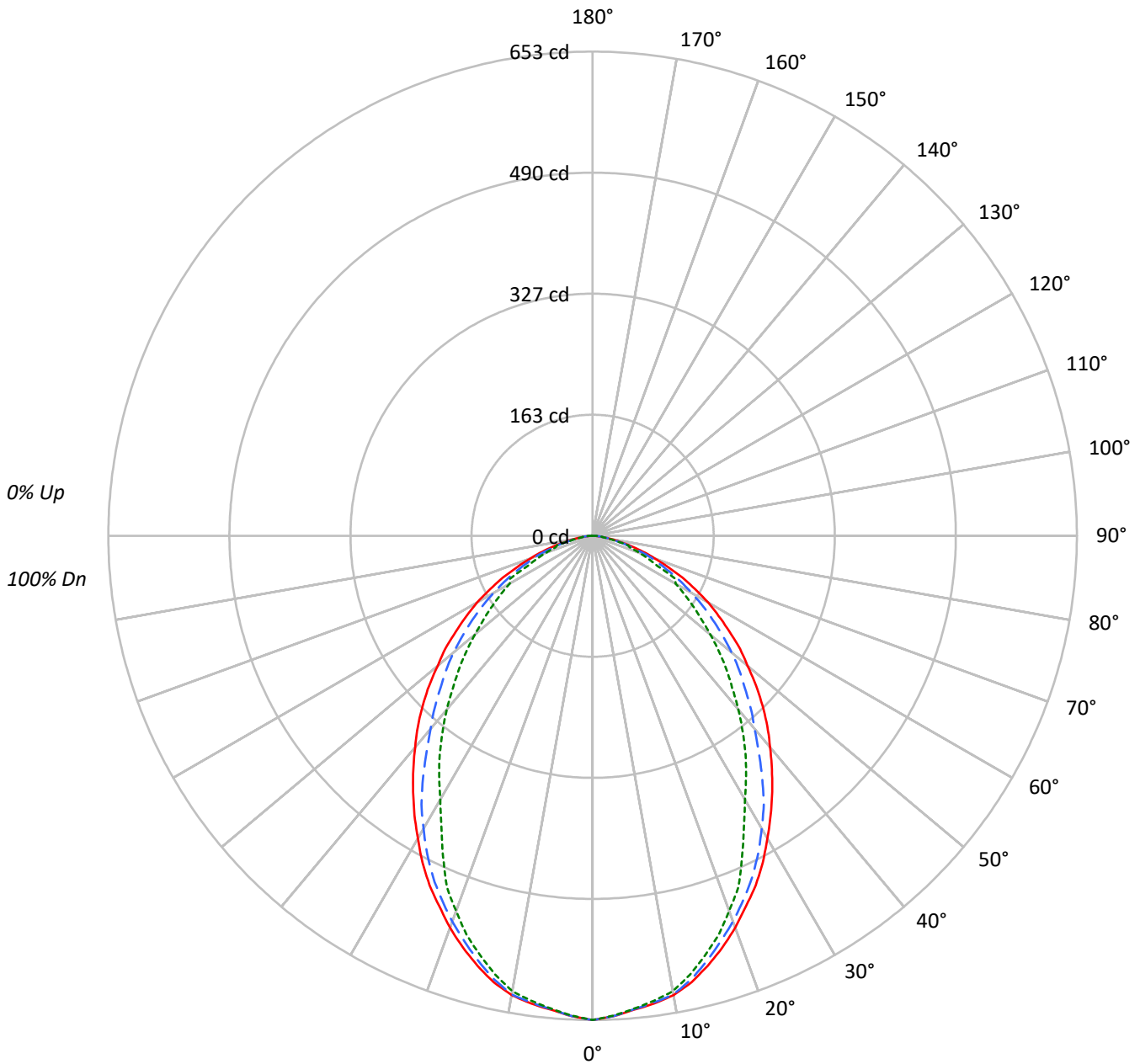
Lumens per Lamp: N/A
Luminaire Lumens: 1282.0 lumens
Efficiency: N/A
Efficacy: 77.2 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

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°	7029	7029	7029
5°	6934	6926	6917
10°	6874	6865	6816
15°	6688	6620	6528
20°	6442	6339	6166
25°	6178	6043	5666
30°	5855	5668	5105
35°	5545	5238	4723
40°	5230	4773	4297
45°	4931	4413	3885
50°	4563	4096	3465
55°	4222	3712	3102
60°	3869	3315	2779
65°	3403	2904	2460
70°	2804	2543	2090
75°	2229	1946	2042
80°	1500	1401	1308
85°	926	1124	1309



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	60.8	4.7
10°-20°	166.8	13.0
20°-30°	231.0	18.0
30°-40°	246.3	19.2
40°-50°	224.7	17.5
50°-60°	176.0	13.7
60°-70°	114.7	8.9
70°-80°	50.8	4.0
80°-90°	10.9	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°	458.6	35.8
0°-40°	704.9	55.0
0°-60°	1105.5	86.2
0°-90°	1282.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1282.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	653	653	653	653	653	
5°	642	641	641	640	640	61
15°	600	600	594	588	586	169
25°	520	517	509	491	477	239
35°	422	419	399	368	359	264
45°	324	317	290	266	255	249
55°	225	218	198	174	165	202
65°	134	126	114	116	97	132
75°	54	50	47	44	49	57
85°	8	8	9	10	11	10
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	653.0	653.0	653.0	653.0	653.0
2.5°	648.5	648.5	648.5	647.7	647.7
5°	641.7	641.0	641.0	640.2	640.2
7.5°	636.4	635.7	634.9	634.2	632.6
10°	628.9	628.9	628.1	624.3	623.6
12.5°	616.8	616.0	613.0	607.7	606.2
15°	600.2	600.2	594.1	588.1	585.8
17.5°	582.1	581.3	573.8	567.7	564.7
20°	562.4	560.9	553.4	543.6	538.3
22.5°	540.5	540.5	531.5	518.7	513.4
25°	520.2	517.1	508.8	490.7	477.1
27.5°	496.8	492.2	483.2	457.5	441.6
30°	471.1	468.8	456.0	422.8	410.7
32.5°	446.9	443.2	429.6	394.8	385.0
35°	422.0	419.0	398.6	368.4	359.4
37.5°	397.1	393.3	367.7	343.5	332.2
40°	372.2	367.7	339.7	317.8	305.8
42.5°	348.8	342.7	315.6	292.2	278.6
45°	323.9	317.1	289.9	265.7	255.2
47.5°	299.0	292.9	268.0	243.1	231.0
50°	272.5	267.3	244.6	219.7	206.9
52.5°	250.6	242.3	220.4	195.5	185.0
55°	225.0	218.2	197.8	174.4	165.3
57.5°	201.6	194.8	175.9	154.0	146.5
60°	179.7	169.9	154.0	135.1	129.1
62.5°	155.5	148.0	134.4	118.5	126.1
65°	133.6	126.1	114.0	116.3	96.6
67.5°	109.5	105.7	95.1	84.6	81.5
70°	89.1	84.6	80.8	69.5	66.4
72.5°	71.0	66.4	61.2	55.1	52.8
75°	53.6	49.8	46.8	44.5	49.1
77.5°	37.0	35.5	33.2	31.0	30.2
80°	24.2	23.4	22.6	21.9	21.1
82.5°	14.3	14.3	14.3	14.3	14.3
85°	7.5	8.3	9.1	9.8	10.6
87.5°	4.5	4.5	5.3	6.0	6.8
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)