

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: P545767

Luminaire Tested: **FMR-12-2-LD4-2STD-40-UNV-82-84-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: P545767
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-LD4-2STD-40-UNV-82-84-EDD
Description: 1X2 FMR TROFFER WITH .187 CLEAR PC 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

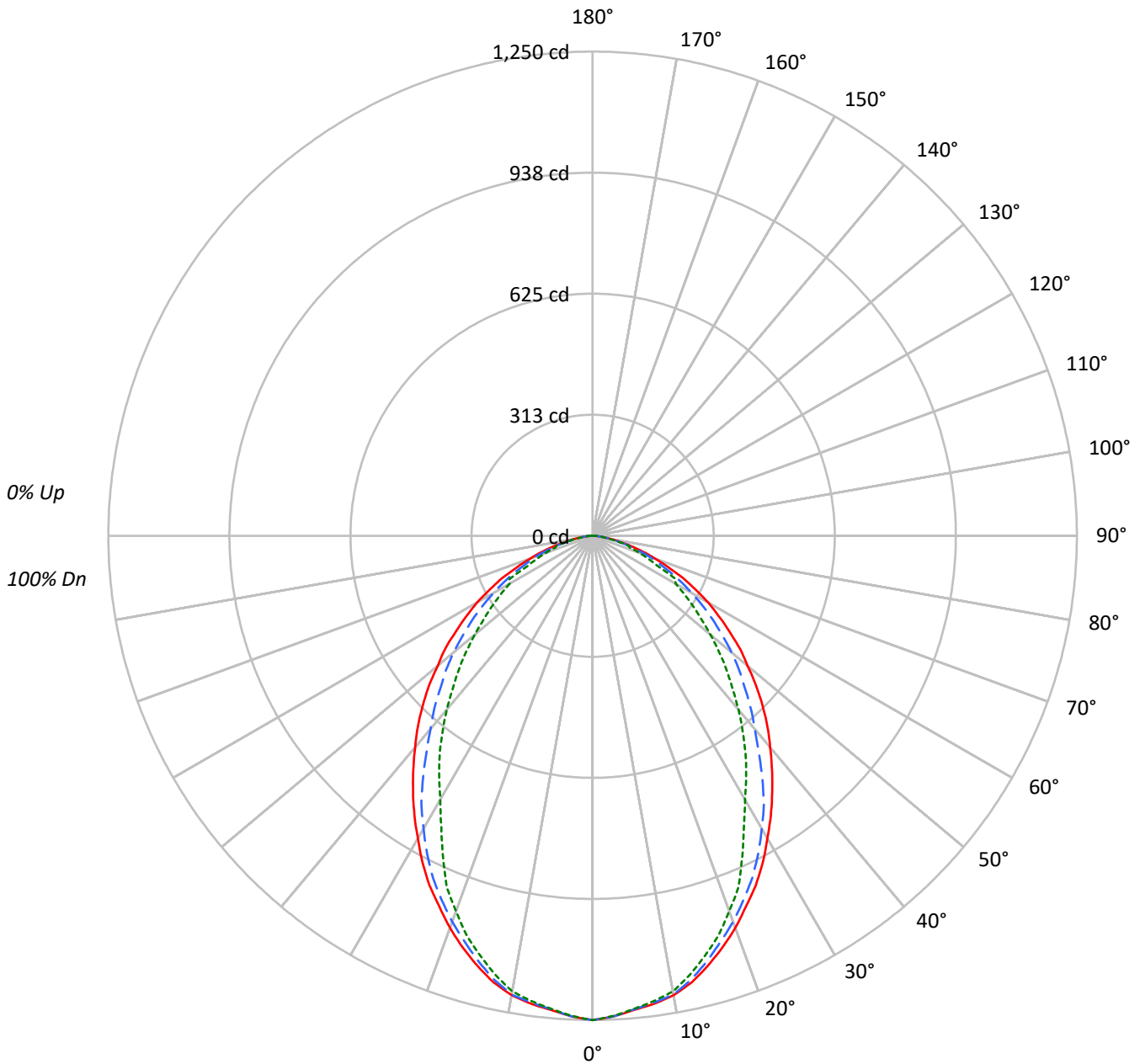
Lumens per Lamp: N/A
Luminaire Lumens: 2455.0 lumens
Efficiency: N/A
Efficacy: 73.7 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 33.3
Input Voltage (V): NR
Input Current (A_{in}): 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°	6730	6730	6730
5°	6639	6631	6623
10°	6581	6573	6526
15°	6404	6340	6251
20°	6169	6069	5904
25°	5915	5786	5426
30°	5606	5427	4888
35°	5310	5015	4522
40°	5007	4571	4114
45°	4720	4226	3720
50°	4370	3922	3316
55°	4042	3554	2971
60°	3704	3174	2661
65°	3259	2780	2357
70°	2685	2434	2002
75°	2133	1863	1955
80°	1435	1345	1255
85°	895	1068	1247



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	116.4	4.7
10°-20°	319.5	13.0
20°-30°	442.3	18.0
30°-40°	471.6	19.2
40°-50°	430.2	17.5
50°-60°	337.1	13.7
60°-70°	219.7	8.9
70°-80°	97.3	4.0
80°-90°	20.9	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°	878.2	35.8
0°-40°	1349.8	55.0
0°-60°	2117.1	86.2
0°-90°	2455.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2455.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1250	1250	1250	1250	1250	
5°	1229	1227	1227	1226	1226	117
15°	1149	1149	1138	1126	1122	323
25°	996	990	974	940	914	457
35°	808	802	763	706	688	505
45°	620	607	555	509	489	478
55°	431	418	379	334	317	386
65°	256	241	218	223	185	252
75°	103	95	90	85	94	110
85°	14	16	17	19	20	20
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1250.5	1250.5	1250.5	1250.5	1250.5
2.5°	1241.9	1241.9	1241.9	1240.4	1240.4
5°	1228.9	1227.4	1227.4	1226.0	1226.0
7.5°	1218.7	1217.3	1215.8	1214.4	1211.5
10°	1204.3	1204.3	1202.8	1195.6	1194.2
12.5°	1181.1	1179.7	1173.9	1163.8	1160.9
15°	1149.3	1149.3	1137.8	1126.2	1121.9
17.5°	1114.6	1113.2	1098.7	1087.2	1081.4
20°	1077.1	1074.2	1059.7	1040.9	1030.8
22.5°	1035.1	1035.1	1017.8	993.2	983.1
25°	996.1	990.3	974.4	939.7	913.7
27.5°	951.3	942.6	925.3	876.1	845.7
30°	902.1	897.8	873.2	809.6	786.5
32.5°	855.9	848.6	822.6	756.1	737.3
35°	808.2	802.4	763.3	705.5	688.2
37.5°	760.4	753.2	704.1	657.8	636.1
40°	712.7	704.1	650.6	608.6	585.5
42.5°	667.9	656.4	604.3	559.5	533.5
45°	620.2	607.2	555.2	508.9	488.7
47.5°	572.5	560.9	513.2	465.5	442.4
50°	521.9	511.8	468.4	420.7	396.1
52.5°	480.0	464.1	422.1	374.4	354.2
55°	430.8	417.8	378.8	334.0	316.6
57.5°	386.0	373.0	336.9	294.9	280.5
60°	344.1	325.3	294.9	258.8	247.2
62.5°	297.8	283.4	257.3	227.0	241.4
65°	255.9	241.4	218.3	222.6	185.1
67.5°	209.6	202.4	182.2	161.9	156.1
70°	170.6	161.9	154.7	133.0	127.2
72.5°	135.9	127.2	117.1	105.5	101.2
75°	102.6	95.4	89.6	85.3	94.0
77.5°	70.8	67.9	63.6	59.3	57.8
80°	46.3	44.8	43.4	41.9	40.5
82.5°	27.5	27.5	27.5	27.5	27.5
85°	14.5	15.9	17.3	18.8	20.2
87.5°	8.7	8.7	10.1	11.6	13.0
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)