

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: P545728

Luminaire Tested: **FMR-12-2-LD4-2STD-35-UNV-81-85-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: P545728
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-35-UNV-81-85-EDD
Description: 1X2 FMR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

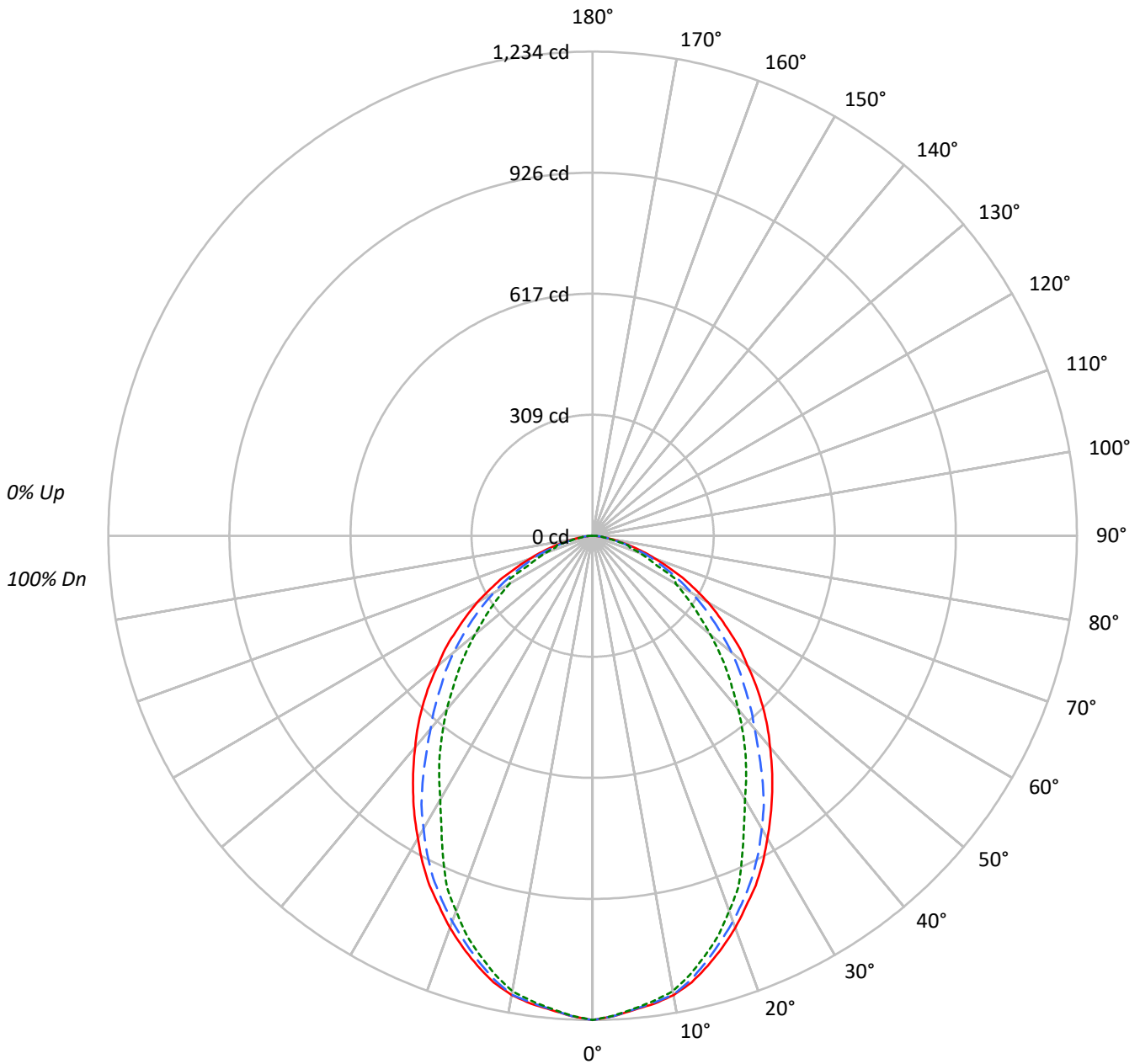
Lumens per Lamp: N/A
Luminaire Lumens: 2423.0 lumens
Efficiency: N/A
Efficacy: 72.8 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P545728

CATALOG NUMBER: FMR-12-2-LD4-2STD-35-UNV-81-85-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P545728

CATALOG NUMBER: FMR-12-2-LD4-2STD-35-UNV-81-85-EDD

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°	6642	6642	6642
5°	6552	6545	6537
10°	6496	6488	6441
15°	6321	6257	6170
20°	6088	5990	5827
25°	5838	5711	5355
30°	5533	5356	4824
35°	5240	4950	4462
40°	4942	4511	4060
45°	4659	4170	3671
50°	4313	3871	3274
55°	3990	3507	2932
60°	3655	3133	2626
65°	3217	2744	2325
70°	2650	2403	1976
75°	2106	1840	1928
80°	1416	1327	1240
85°	883	1056	1235



TEST NUMBER: P545728

CATALOG NUMBER: FMR-12-2-LD4-2STD-35-UNV-81-85-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	114.9	4.7
10°-20°	315.3	13.0
20°-30°	436.5	18.0
30°-40°	465.5	19.2
40°-50°	424.6	17.5
50°-60°	332.7	13.7
60°-70°	216.8	8.9
70°-80°	96.1	4.0
80°-90°	20.6	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°	866.7	35.8
0°-40°	1332.2	55.0
0°-60°	2089.5	86.2
0°-90°	2423.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2423.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1234	1234	1234	1234	1234	
5°	1213	1211	1211	1210	1210	115
15°	1134	1134	1123	1112	1107	319
25°	983	977	962	928	902	451
35°	798	792	753	696	679	499
45°	612	599	548	502	482	471
55°	425	412	374	330	312	381
65°	253	238	216	220	183	249
75°	101	94	88	84	93	109
85°	14	16	17	18	20	20
90°	0	0	0	0	0	



TEST NUMBER: P545728

CATALOG NUMBER: FMR-12-2-LD4-2STD-35-UNV-81-85-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1234.2	1234.2	1234.2	1234.2	1234.2
2.5°	1225.7	1225.7	1225.7	1224.3	1224.3
5°	1212.8	1211.4	1211.4	1210.0	1210.0
7.5°	1202.9	1201.4	1200.0	1198.6	1195.7
10°	1188.6	1188.6	1187.2	1180.0	1178.6
12.5°	1165.8	1164.3	1158.6	1148.6	1145.8
15°	1134.4	1134.4	1122.9	1111.5	1107.3
17.5°	1100.1	1098.7	1084.4	1073.0	1067.3
20°	1063.0	1060.2	1045.9	1027.3	1017.4
22.5°	1021.6	1021.6	1004.5	980.3	970.3
25°	983.1	977.4	961.7	927.5	901.8
27.5°	938.9	930.3	913.2	864.7	834.7
30°	890.4	886.1	861.8	799.0	776.2
32.5°	844.7	837.6	811.9	746.3	727.7
35°	797.6	791.9	753.4	696.3	679.2
37.5°	750.5	743.4	694.9	649.2	627.8
40°	703.4	694.9	642.1	600.7	577.9
42.5°	659.2	647.8	596.4	552.2	526.5
45°	612.1	599.3	547.9	502.3	482.3
47.5°	565.0	553.6	506.5	459.5	436.6
50°	515.1	505.1	462.3	415.2	391.0
52.5°	473.7	458.0	416.6	369.6	349.6
55°	425.2	412.4	373.8	329.6	312.5
57.5°	381.0	368.1	332.5	291.1	276.8
60°	339.6	321.0	291.1	255.4	244.0
62.5°	293.9	279.7	254.0	224.0	238.3
65°	252.6	238.3	215.5	219.7	182.6
67.5°	206.9	199.8	179.8	159.8	154.1
70°	168.4	159.8	152.7	131.3	125.6
72.5°	134.1	125.6	115.6	104.2	99.9
75°	101.3	94.2	88.5	84.2	92.7
77.5°	69.9	67.1	62.8	58.5	57.1
80°	45.7	44.2	42.8	41.4	40.0
82.5°	27.1	27.1	27.1	27.1	27.1
85°	14.3	15.7	17.1	18.5	20.0
87.5°	8.6	8.6	10.0	11.4	12.8
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)