

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: P545813

Luminaire Tested: **FMR-12-2-LD4-2STD-50-UNV-93-96-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: P545813
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-50-UNV-93-96-EDD
Description: 1X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

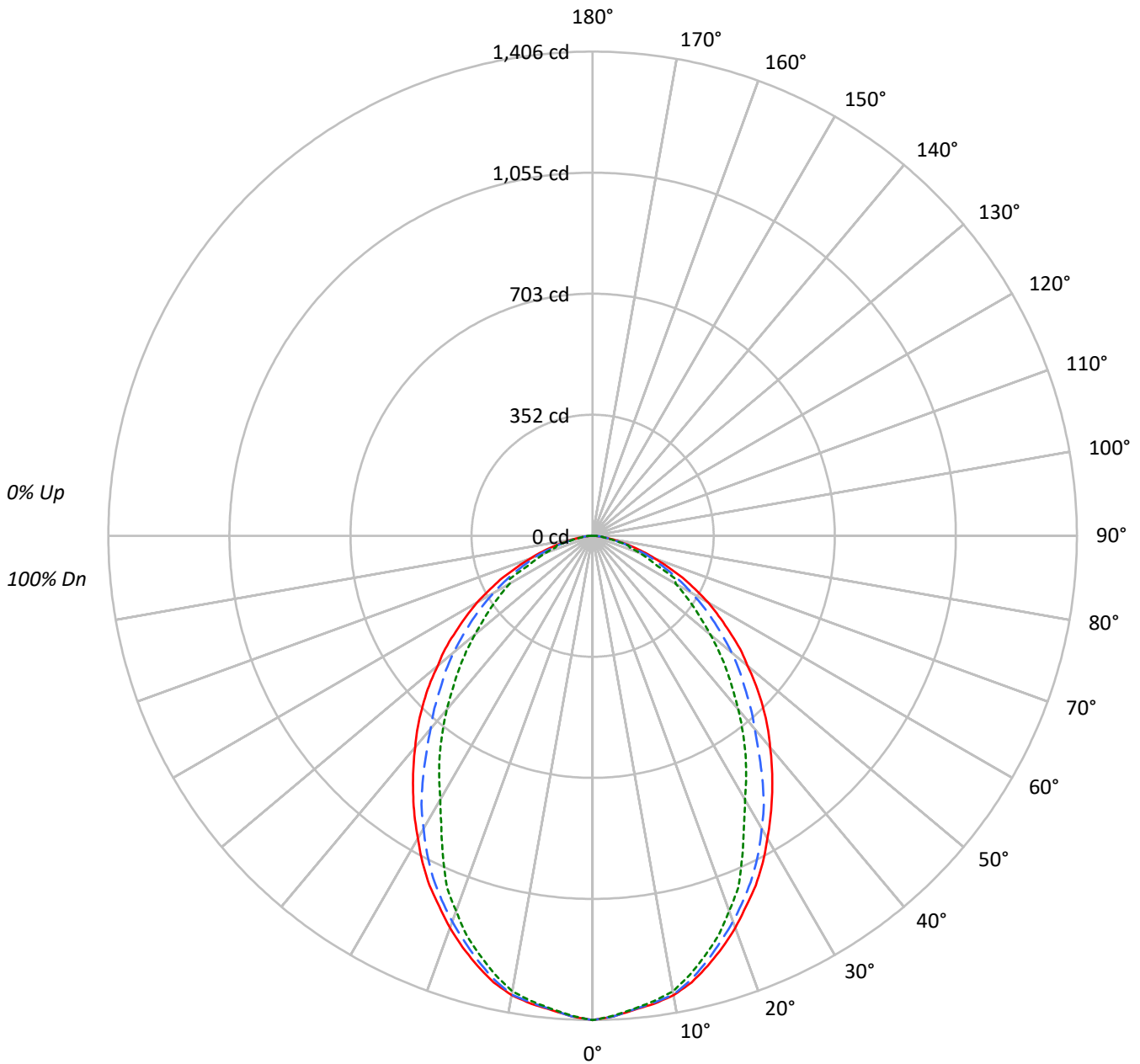
Lumens per Lamp: N/A
Luminaire Lumens: 2761.0 lumens
Efficiency: N/A
Efficacy: 82.9 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

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°	7569	7569	7569
5°	7466	7458	7449
10°	7402	7393	7339
15°	7202	7130	7030
20°	6938	6826	6640
25°	6653	6508	6102
30°	6305	6103	5497
35°	5972	5640	5085
40°	5632	5141	4626
45°	5309	4752	4183
50°	4915	4411	3730
55°	4546	3997	3341
60°	4166	3570	2992
65°	3665	3126	2650
70°	3020	2738	2252
75°	2400	2096	2198
80°	1612	1512	1410
85°	1007	1204	1408



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	130.9	4.7
10°-20°	359.3	13.0
20°-30°	497.4	18.0
30°-40°	530.4	19.2
40°-50°	483.9	17.5
50°-60°	379.1	13.7
60°-70°	247.1	8.9
70°-80°	109.5	4.0
80°-90°	23.5	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°	987.6	35.8
0°-40°	1518.0	55.0
0°-60°	2381.0	86.2
0°-90°	2761.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2761.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1406	1406	1406	1406	1406	
5°	1382	1380	1380	1379	1379	131
15°	1293	1293	1280	1267	1262	363
25°	1120	1114	1096	1057	1028	514
35°	909	902	858	793	774	568
45°	698	683	624	572	550	537
55°	484	470	426	376	356	435
65°	288	272	246	250	208	284
75°	115	107	101	96	106	124
85°	16	18	20	21	23	23
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1406.4	1406.4	1406.4	1406.4	1406.4
2.5°	1396.7	1396.7	1396.7	1395.0	1395.0
5°	1382.0	1380.4	1380.4	1378.8	1378.8
7.5°	1370.6	1369.0	1367.4	1365.8	1362.5
10°	1354.4	1354.4	1352.8	1344.6	1343.0
12.5°	1328.4	1326.7	1320.2	1308.9	1305.6
15°	1292.6	1292.6	1279.6	1266.6	1261.7
17.5°	1253.6	1252.0	1235.7	1222.7	1216.2
20°	1211.3	1208.1	1191.8	1170.7	1159.3
22.5°	1164.2	1164.2	1144.6	1117.0	1105.6
25°	1120.3	1113.8	1095.9	1056.8	1027.6
27.5°	1069.9	1060.1	1040.6	985.3	951.2
30°	1014.6	1009.7	982.1	910.5	884.5
32.5°	962.5	954.4	925.1	850.4	829.2
35°	908.9	902.4	858.5	793.4	773.9
37.5°	855.2	847.1	791.8	739.8	715.4
40°	801.6	791.8	731.7	684.5	658.5
42.5°	751.2	738.2	679.6	629.2	600.0
45°	697.5	682.9	624.4	572.3	549.6
47.5°	643.9	630.9	577.2	523.5	497.5
50°	587.0	575.6	526.8	473.1	445.5
52.5°	539.8	521.9	474.8	421.1	398.3
55°	484.5	469.9	426.0	375.6	356.1
57.5°	434.1	419.5	378.8	331.7	315.4
60°	387.0	365.8	331.7	291.0	278.0
62.5°	334.9	318.7	289.4	255.3	271.5
65°	287.8	271.5	245.5	250.4	208.1
67.5°	235.8	227.6	204.9	182.1	175.6
70°	191.9	182.1	174.0	149.6	143.1
72.5°	152.8	143.1	131.7	118.7	113.8
75°	115.4	107.3	100.8	95.9	105.7
77.5°	79.7	76.4	71.5	66.7	65.0
80°	52.0	50.4	48.8	47.2	45.5
82.5°	30.9	30.9	30.9	30.9	30.9
85°	16.3	17.9	19.5	21.1	22.8
87.5°	9.8	9.8	11.4	13.0	14.6
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)