

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: P545616

Luminaire Tested: **FMR-12-2-LD4-2HI-50-UNV-93-85-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: P545616
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-LD4-2HI-50-UNV-93-85-EDD
Description: 1X2 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

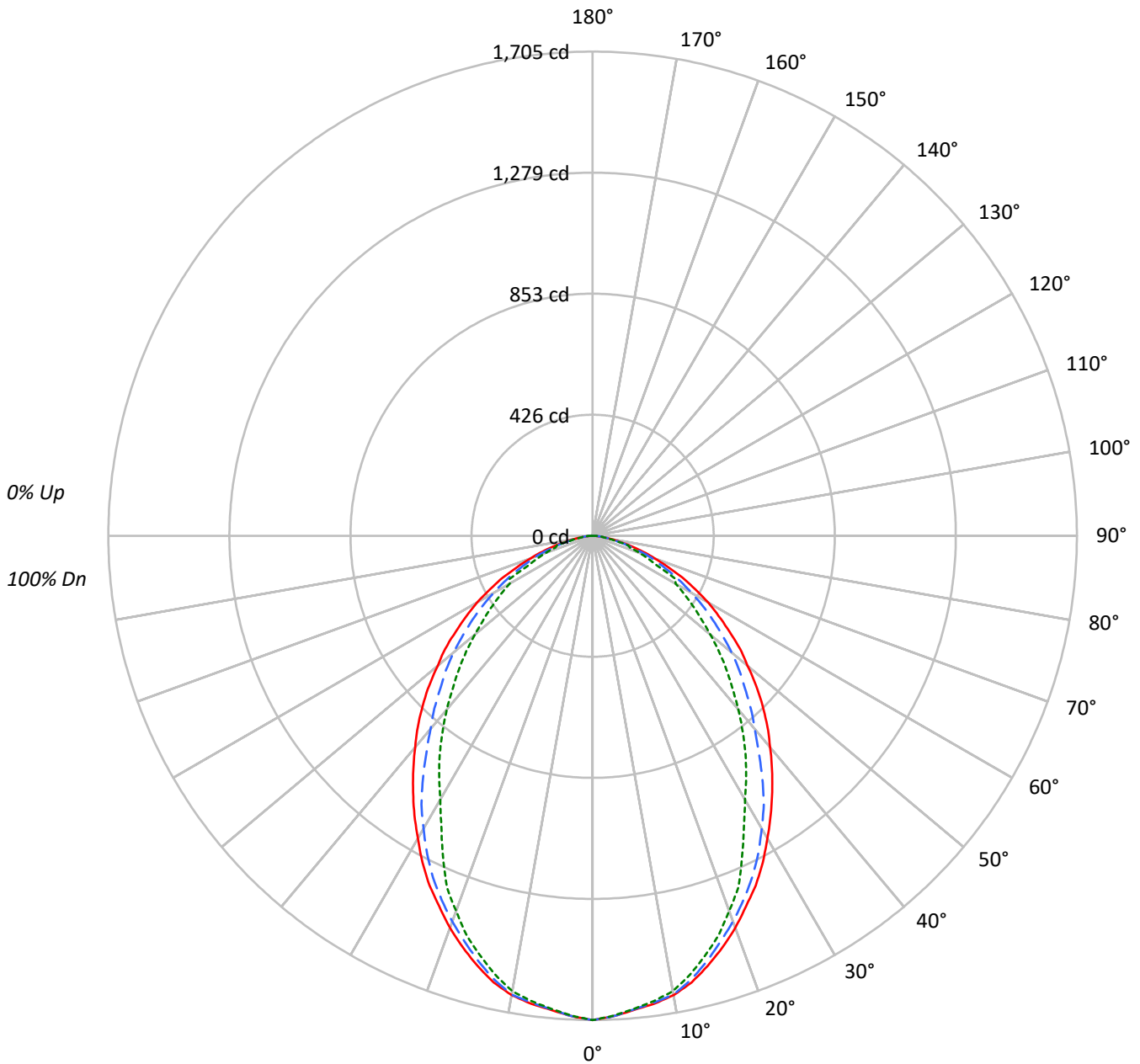
Lumens per Lamp: N/A
Luminaire Lumens: 3348.0 lumens
Efficiency: N/A
Efficacy: 77.5 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 43.2
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

TEST NUMBER: P545616

CATALOG NUMBER: FMR-12-2-LD4-2HI-50-UNV-93-85-EDD

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°	9178	9178	9178
5°	9054	9043	9032
10°	8975	8965	8900
15°	8733	8645	8525
20°	8412	8277	8051
25°	8067	7891	7399
30°	7646	7400	6665
35°	7241	6840	6166
40°	6829	6233	5610
45°	6438	5762	5072
50°	5959	5349	4523
55°	5513	4847	4052
60°	5050	4329	3629
65°	4444	3791	3214
70°	3660	3320	2730
75°	2911	2541	2666
80°	1956	1832	1711
85°	1216	1463	1704



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	158.8	4.7
10°-20°	435.7	13.0
20°-30°	603.2	18.0
30°-40°	643.2	19.2
40°-50°	586.7	17.5
50°-60°	459.7	13.7
60°-70°	299.6	8.9
70°-80°	132.7	4.0
80°-90°	28.5	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°	1197.6	35.8
0°-40°	1840.8	55.0
0°-60°	2887.2	86.2
0°-90°	3348.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3348.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1705	1705	1705	1705	1705	
5°	1676	1674	1674	1672	1672	159
15°	1567	1567	1552	1536	1530	441
25°	1358	1350	1329	1282	1246	624
35°	1102	1094	1041	962	938	689
45°	846	828	757	694	666	652
55°	588	570	517	455	432	527
65°	349	329	298	304	252	344
75°	140	130	122	116	128	150
85°	20	22	24	26	28	27
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1705.4	1705.4	1705.4	1705.4	1705.4
2.5°	1693.6	1693.6	1693.6	1691.6	1691.6
5°	1675.9	1673.9	1673.9	1671.9	1671.9
7.5°	1662.1	1660.1	1658.1	1656.1	1652.2
10°	1642.3	1642.3	1640.4	1630.5	1628.5
12.5°	1610.8	1608.8	1600.9	1587.1	1583.2
15°	1567.4	1567.4	1551.6	1535.9	1530.0
17.5°	1520.1	1518.1	1498.4	1482.6	1474.8
20°	1468.8	1464.9	1445.2	1419.5	1405.7
22.5°	1411.7	1411.7	1388.0	1354.5	1340.7
25°	1358.4	1350.5	1328.9	1281.5	1246.0
27.5°	1297.3	1285.5	1261.8	1194.8	1153.4
30°	1230.3	1224.4	1190.8	1104.1	1072.5
32.5°	1167.2	1157.3	1121.8	1031.1	1005.5
35°	1102.1	1094.2	1041.0	962.1	938.5
37.5°	1037.1	1027.2	960.2	897.1	867.5
40°	972.0	960.2	887.2	830.0	798.5
42.5°	910.9	895.1	824.1	763.0	727.5
45°	845.8	828.1	757.1	694.0	666.4
47.5°	780.8	765.0	699.9	634.9	603.3
50°	711.7	697.9	638.8	573.7	540.2
52.5°	654.6	632.9	575.7	510.6	483.0
55°	587.5	569.8	516.6	455.4	431.8
57.5°	526.4	508.7	459.4	402.2	382.5
60°	469.2	443.6	402.2	352.9	337.1
62.5°	406.1	386.4	350.9	309.5	329.3
65°	349.0	329.3	297.7	303.6	252.4
67.5°	285.9	276.0	248.4	220.8	212.9
70°	232.6	220.8	211.0	181.4	173.5
72.5°	185.3	173.5	159.7	143.9	138.0
75°	140.0	130.1	122.2	116.3	128.2
77.5°	96.6	92.7	86.8	80.8	78.9
80°	63.1	61.1	59.1	57.2	55.2
82.5°	37.5	37.5	37.5	37.5	37.5
85°	19.7	21.7	23.7	25.6	27.6
87.5°	11.8	11.8	13.8	15.8	17.7
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)