

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: P589224

Luminaire Tested: **FMR-24-2-LD4-2STD-40-UNV-82-87-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589224
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-1)
Test Lab: INNOVATION CENTER
Issue Date: 12/8/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FMR-24-2-LD4-2STD-40-UNV-82-87-EDD
Description: 2X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

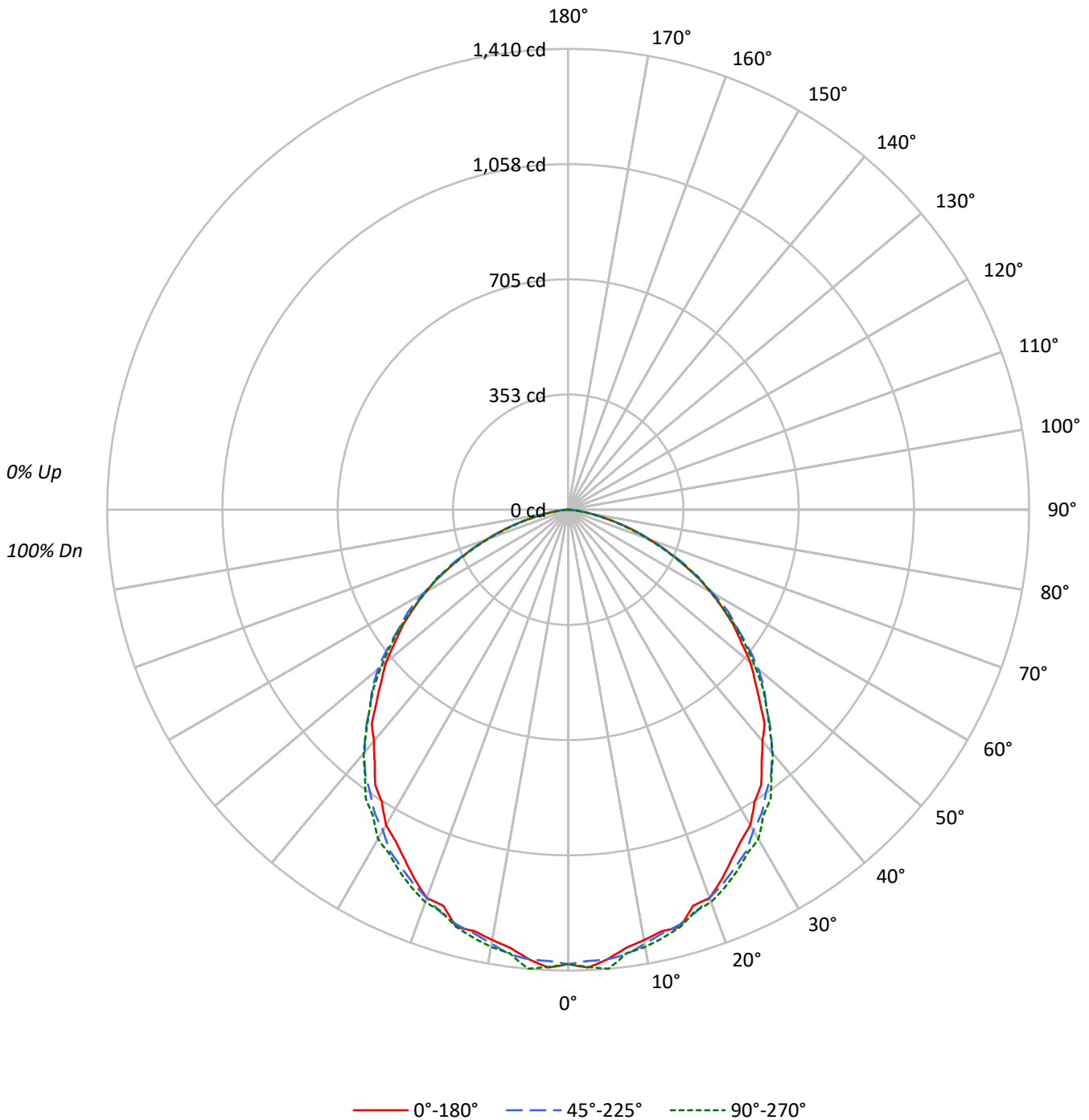
Lumens per Lamp: N/A
Luminaire Lumens: 3504.0 lumens
Efficiency: N/A
Efficacy: 105.2 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 33.3
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				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	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	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3741	3741	3741
5°	3729	3730	3809
10°	3653	3685	3711
15°	3682	3662	3683
20°	3620	3620	3659
25°	3509	3586	3625
30°	3461	3521	3615
35°	3379	3467	3545
40°	3248	3404	3419
45°	3149	3261	3266
50°	3046	3183	3123
55°	2902	2959	2937
60°	2714	2741	2692
65°	2420	2481	2402
70°	2076	2083	2025
75°	1644	1641	1577
80°	1102	1071	1029
85°	599	593	556



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	130.8	3.7
10°-20°	370.6	10.6
20°-30°	555.3	15.8
30°-40°	658.1	18.8
40°-50°	659.4	18.8
50°-60°	559.7	16.0
60°-70°	377.3	10.8
70°-80°	165.8	4.7
80°-90°	27.0	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°	1056.7	30.2
0°-40°	1714.9	48.9
0°-60°	2933.9	83.7
0°-90°	3504.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3504.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1390	1390	1390	1390	1390	
5°	1380	1377	1381	1377	1410	130
15°	1322	1306	1314	1321	1322	368
25°	1182	1188	1208	1223	1221	546
35°	1029	1032	1056	1080	1079	639
45°	828	843	857	879	858	640
55°	619	614	631	626	626	550
65°	380	375	390	375	377	378
75°	158	155	158	147	152	169
85°	19	19	19	19	18	28
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1390.3	1390.3	1390.3	1390.3	1390.3
2.5°	1402.3	1391.7	1381.9	1393.4	1400.4
5°	1380.4	1377.2	1381.0	1376.8	1410.0
7.5°	1352.1	1364.4	1371.6	1367.1	1369.1
10°	1337.0	1332.7	1348.7	1359.8	1358.2
12.5°	1320.8	1327.3	1328.2	1340.2	1341.3
15°	1321.7	1306.5	1314.5	1321.4	1321.9
17.5°	1270.4	1286.9	1292.5	1308.1	1288.7
20°	1264.1	1252.1	1264.1	1280.1	1277.6
22.5°	1225.5	1212.0	1237.9	1252.1	1251.2
25°	1181.7	1188.2	1207.6	1223.4	1220.8
27.5°	1143.3	1150.8	1178.5	1200.2	1186.2
30°	1113.7	1109.9	1133.2	1152.6	1163.4
32.5°	1060.7	1074.4	1101.6	1120.9	1110.6
35°	1028.6	1031.6	1055.5	1079.9	1079.2
37.5°	972.4	986.6	1020.2	1027.0	1020.7
40°	924.5	938.7	969.0	976.4	973.3
42.5°	889.1	891.6	917.7	926.1	912.6
45°	827.5	843.0	857.0	879.1	858.2
47.5°	775.1	782.3	812.5	818.4	807.4
50°	727.6	730.1	760.4	753.0	745.9
52.5°	667.8	678.4	695.4	694.0	685.5
55°	618.6	614.5	630.6	626.3	626.1
57.5°	559.5	566.7	580.0	573.2	562.2
60°	504.2	504.4	509.3	501.5	500.1
62.5°	442.7	444.8	445.9	436.4	451.8
65°	380.0	375.0	389.7	374.8	377.3
67.5°	322.4	324.9	323.5	314.1	317.7
70°	263.9	267.1	264.8	254.2	257.4
72.5°	210.4	206.4	208.9	195.7	201.8
75°	158.1	154.9	157.8	146.7	151.7
77.5°	107.7	110.2	108.4	102.5	105.9
80°	71.1	69.1	69.1	65.7	66.4
82.5°	41.5	39.5	39.0	37.9	39.5
85°	19.4	18.8	19.2	18.7	18.0
87.5°	7.0	7.2	7.2	6.8	6.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)