

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: P589227

Luminaire Tested: **FMR-24-2-LD4-2STD-40-UNV-82-96-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589227
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-82-96-EDD
Description: 2X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

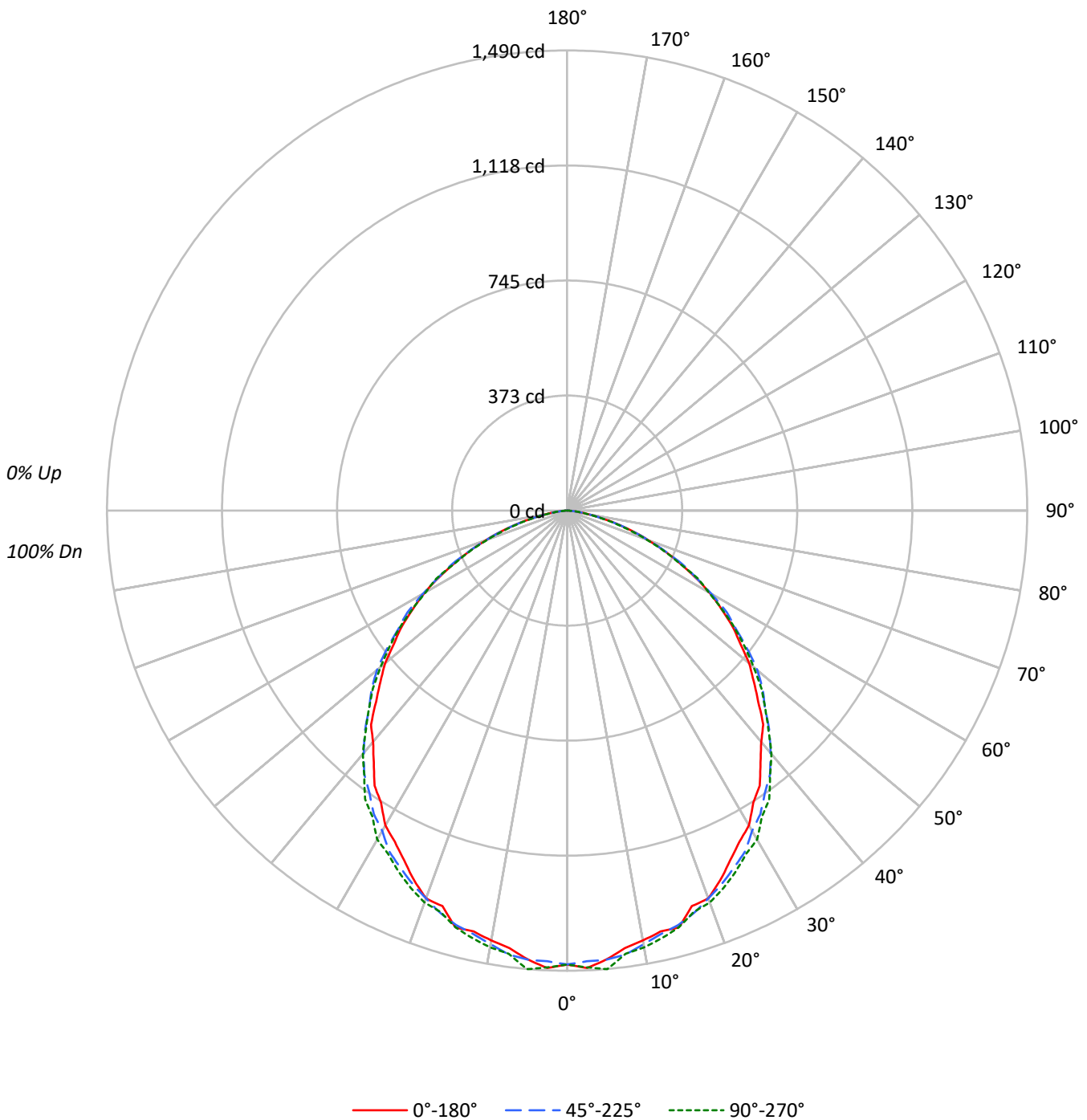
Lumens per Lamp: N/A
Luminaire Lumens: 3704.0 lumens
Efficiency: N/A
Efficacy: 111.2 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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	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									100																			
1	110	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86									86																			
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73									73																			
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62									62																			
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53									53																			
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46									46																			
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41									41																			
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36									36																			
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32									32																			
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29									29																			
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26									26																			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3955	3955	3955
5°	3942	3943	4026
10°	3862	3895	3923
15°	3892	3871	3893
20°	3827	3827	3867
25°	3709	3790	3832
30°	3658	3722	3821
35°	3572	3665	3748
40°	3433	3598	3614
45°	3329	3448	3452
50°	3220	3365	3301
55°	3068	3127	3105
60°	2869	2897	2845
65°	2558	2623	2540
70°	2194	2202	2141
75°	1738	1734	1667
80°	1164	1133	1088
85°	633	627	587



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	138.2	3.7
10°-20°	391.8	10.6
20°-30°	587.0	15.8
30°-40°	695.7	18.8
40°-50°	697.0	18.8
50°-60°	591.6	16.0
60°-70°	398.9	10.8
70°-80°	175.3	4.7
80°-90°	28.5	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°	1117.0	30.2
0°-40°	1812.7	48.9
0°-60°	3101.4	83.7
0°-90°	3704.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3704.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1470	1470	1470	1470	1470	
5°	1459	1456	1460	1455	1490	138
15°	1397	1381	1390	1397	1397	389
25°	1249	1256	1276	1293	1290	578
35°	1087	1090	1116	1142	1141	675
45°	875	891	906	929	907	677
55°	654	650	667	662	662	582
65°	402	396	412	396	399	399
75°	167	164	167	155	160	179
85°	20	20	20	20	19	30
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1469.7	1469.7	1469.7	1469.7	1469.7
2.5°	1482.4	1471.2	1460.7	1472.9	1480.3
5°	1459.2	1455.8	1459.8	1455.4	1490.5
7.5°	1429.2	1442.3	1449.9	1445.2	1447.3
10°	1413.3	1408.7	1425.6	1437.4	1435.7
12.5°	1396.2	1403.0	1404.0	1416.7	1417.9
15°	1397.2	1381.0	1389.6	1396.8	1397.4
17.5°	1342.9	1360.4	1366.2	1382.7	1362.3
20°	1336.3	1323.5	1336.3	1353.1	1350.5
22.5°	1295.5	1281.2	1308.6	1323.5	1322.6
25°	1249.2	1256.0	1276.5	1293.2	1290.5
27.5°	1208.6	1216.5	1245.7	1268.7	1253.9
30°	1177.2	1173.3	1197.9	1218.4	1229.8
32.5°	1121.3	1135.7	1164.5	1184.8	1174.0
35°	1087.3	1090.5	1115.8	1141.6	1140.8
37.5°	1027.9	1042.9	1078.4	1085.6	1078.9
40°	977.2	992.2	1024.3	1032.1	1028.9
42.5°	939.9	942.5	970.0	978.9	964.7
45°	874.8	891.1	905.9	929.2	907.2
47.5°	819.4	827.0	858.8	865.1	853.5
50°	769.1	771.7	803.8	796.0	788.4
52.5°	705.9	717.1	735.1	733.6	724.7
55°	653.9	649.5	666.6	662.1	661.9
57.5°	591.5	599.1	613.1	605.9	594.3
60°	533.0	533.2	538.3	530.2	528.7
62.5°	467.9	470.2	471.4	461.3	477.6
65°	401.7	396.4	412.0	396.2	398.9
67.5°	340.8	343.5	341.9	332.1	335.9
70°	278.9	282.4	279.9	268.7	272.1
72.5°	222.4	218.2	220.9	206.8	213.3
75°	167.2	163.8	166.8	155.0	160.3
77.5°	113.9	116.5	114.6	108.4	112.0
80°	75.1	73.1	73.1	69.5	70.2
82.5°	43.8	41.7	41.2	40.0	41.7
85°	20.5	19.9	20.3	19.7	19.0
87.5°	7.4	7.6	7.6	7.2	6.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)