

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: P589226

Luminaire Tested: **FMR-24-2-LD4-2STD-40-UNV-82-94-EDD**

Issue Date: 12/8/2021



Test Information

Test Method: LM-79-08
Report Number: P589226
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-82-94-EDD
Description: 2X2 FMR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR
TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

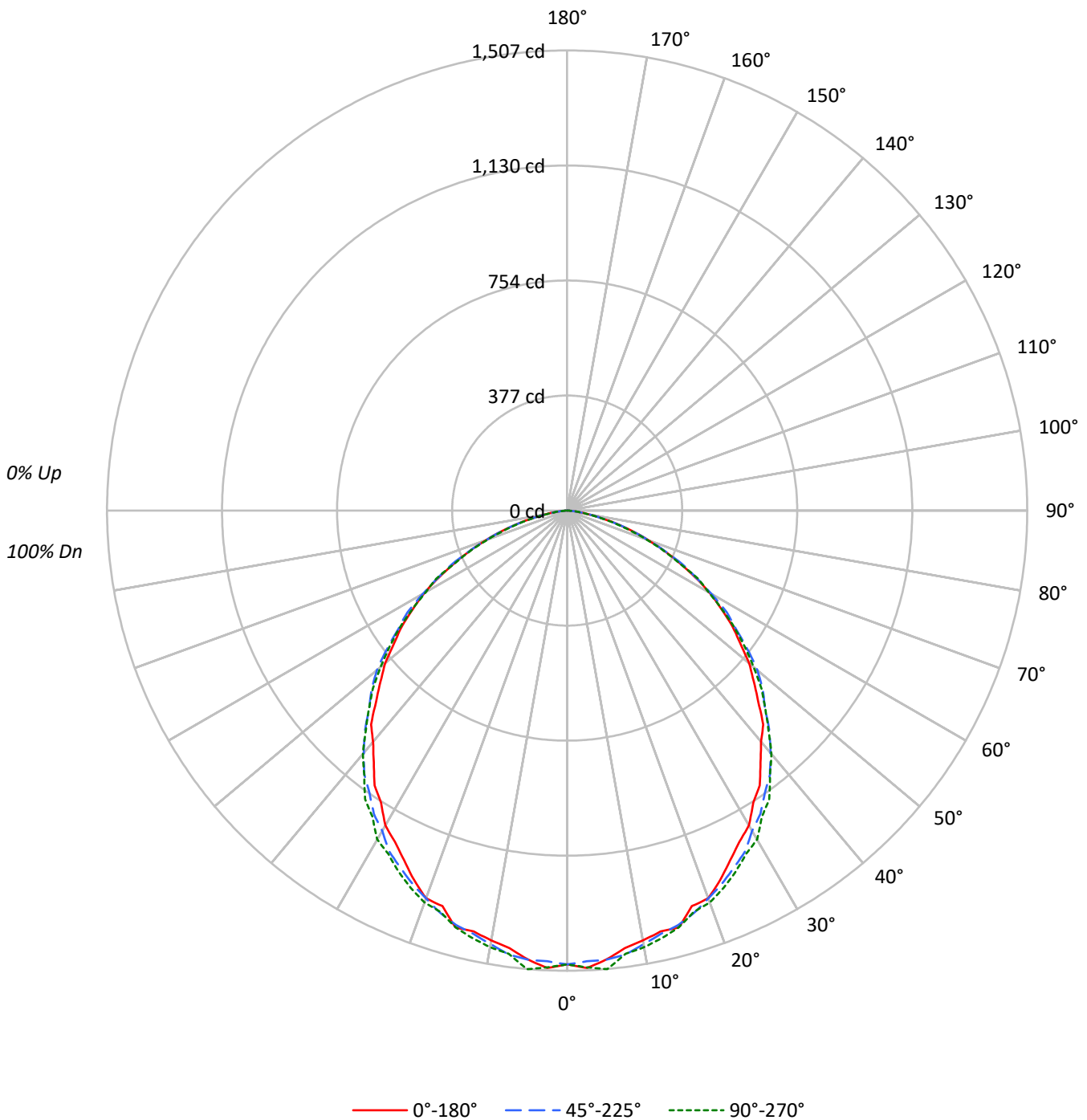
Lumens per Lamp: N/A
Luminaire Lumens: 3746.0 lumens
Efficiency: N/A
Efficacy: 112.5 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P589226

CATALOG NUMBER: FMR-24-2-LD4-2STD-40-UNV-82-94-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P589226

CATALOG NUMBER: FMR-24-2-LD4-2STD-40-UNV-82-94-EDD

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	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°	4000	4000	4000
5°	3987	3988	4072
10°	3906	3940	3968
15°	3936	3915	3937
20°	3870	3870	3911
25°	3751	3833	3875
30°	3700	3764	3865
35°	3612	3707	3790
40°	3472	3639	3655
45°	3367	3487	3492
50°	3256	3403	3338
55°	3103	3163	3141
60°	2901	2930	2878
65°	2587	2653	2569
70°	2220	2227	2165
75°	1758	1754	1686
80°	1178	1145	1100
85°	639	633	593



TEST NUMBER: P589226

CATALOG NUMBER: FMR-24-2-LD4-2STD-40-UNV-82-94-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	139.8	3.7
10°-20°	396.2	10.6
20°-30°	593.7	15.8
30°-40°	703.6	18.8
40°-50°	704.9	18.8
50°-60°	598.3	16.0
60°-70°	403.4	10.8
70°-80°	177.3	4.7
80°-90°	28.8	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°	1129.7	30.2
0°-40°	1833.3	48.9
0°-60°	3136.5	83.7
0°-90°	3746.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3746.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1486	1486	1486	1486	1486	
5°	1476	1472	1476	1472	1507	139
15°	1413	1397	1405	1413	1413	394
25°	1263	1270	1291	1308	1305	584
35°	1100	1103	1128	1154	1154	683
45°	885	901	916	940	918	684
55°	661	657	674	670	669	588
65°	406	401	417	401	403	404
75°	169	166	169	157	162	181
85°	21	20	20	20	19	30
90°	0	0	0	0	0	



TEST NUMBER: P589226

CATALOG NUMBER: FMR-24-2-LD4-2STD-40-UNV-82-94-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1486.3	1486.3	1486.3	1486.3	1486.3
2.5°	1499.2	1487.9	1477.3	1489.6	1497.1
5°	1475.8	1472.3	1476.3	1471.9	1507.4
7.5°	1445.4	1458.7	1466.4	1461.6	1463.7
10°	1429.3	1424.7	1441.8	1453.7	1452.0
12.5°	1412.1	1419.0	1419.9	1432.8	1433.9
15°	1413.0	1396.7	1405.3	1412.6	1413.2
17.5°	1358.1	1375.8	1381.7	1398.4	1377.7
20°	1351.4	1338.5	1351.4	1368.5	1365.8
22.5°	1310.1	1295.8	1323.4	1338.5	1337.6
25°	1263.3	1270.2	1291.0	1307.8	1305.2
27.5°	1222.3	1230.3	1259.9	1283.1	1268.1
30°	1190.6	1186.6	1211.5	1232.2	1243.7
32.5°	1134.0	1148.6	1177.7	1198.3	1187.3
35°	1099.6	1102.9	1128.4	1154.5	1153.7
37.5°	1039.6	1054.7	1090.6	1097.9	1091.2
40°	988.3	1003.5	1035.9	1043.8	1040.5
42.5°	950.5	953.2	981.0	990.0	975.7
45°	884.7	901.2	916.2	939.8	917.5
47.5°	828.7	836.3	868.6	874.9	863.2
50°	777.8	780.5	812.9	805.0	797.4
52.5°	713.9	725.2	743.4	741.9	732.9
55°	661.3	656.9	674.2	669.6	669.4
57.5°	598.2	605.8	620.1	612.8	601.1
60°	539.1	539.3	544.4	536.2	534.7
62.5°	473.2	475.5	476.7	466.5	483.0
65°	406.3	400.9	416.6	400.7	403.4
67.5°	344.7	347.4	345.8	335.8	339.7
70°	282.1	285.6	283.1	271.7	275.2
72.5°	224.9	220.7	223.4	209.2	215.7
75°	169.1	165.6	168.7	156.8	162.2
77.5°	115.1	117.8	115.9	109.6	113.2
80°	76.0	73.9	73.9	70.2	71.0
82.5°	44.3	42.2	41.6	40.5	42.2
85°	20.7	20.2	20.5	20.0	19.2
87.5°	7.5	7.7	7.7	7.3	6.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)