

Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: FAIL-SAFE

Report Number: P561270

Luminaire Tested: FSR-12-4-LD4-1STD-50-UNV-80-87-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561270
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-5)
Test Lab: INNOVATION CENTER
Issue Date: 7/20/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-12-4-LD4-1STD-50-UNV-80-87-EDD-90
Description: 1X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR PC ENVIRONM
SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2783.0 lumens
Efficiency: N/A
Efficacy: 83.6 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

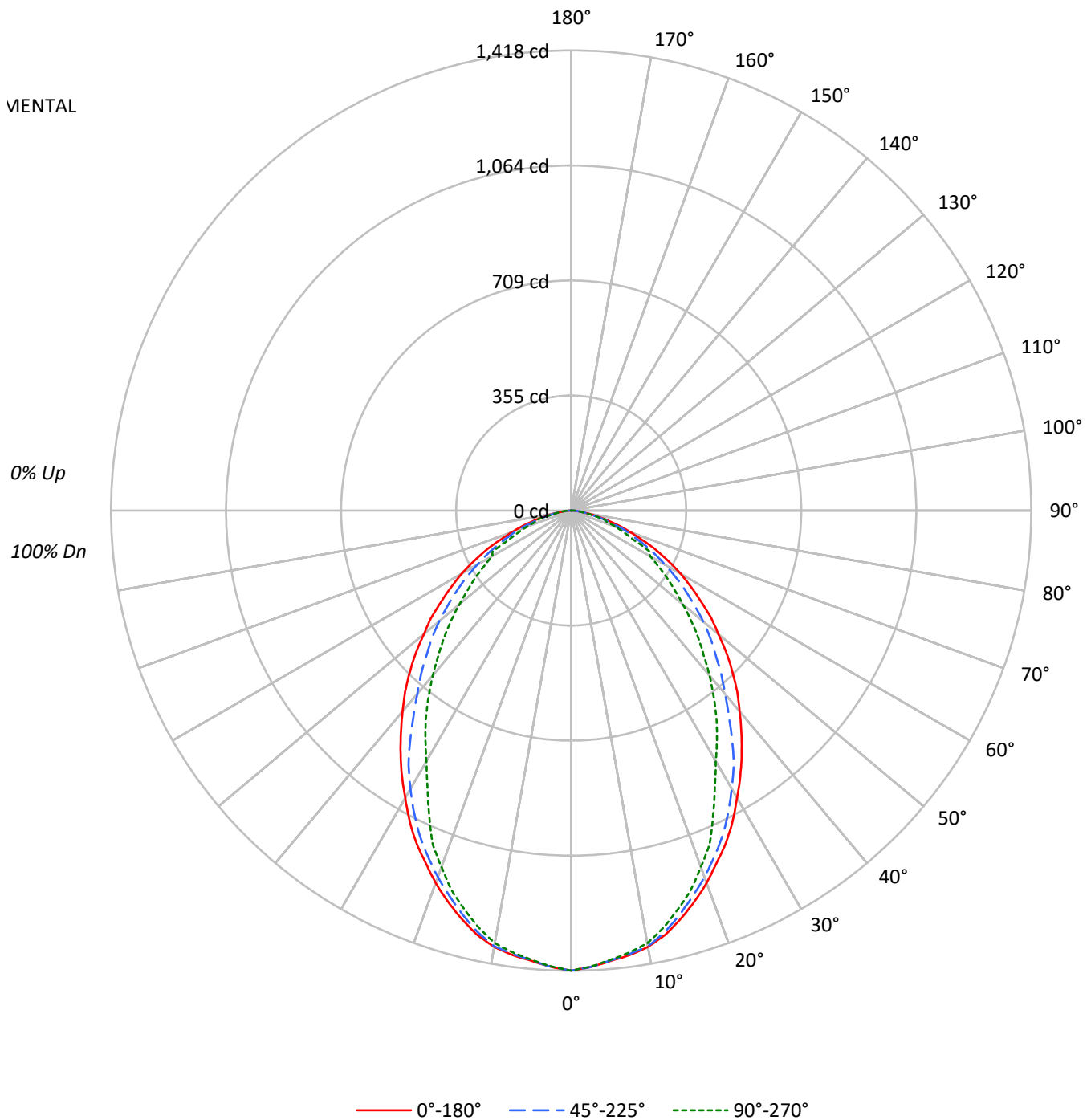
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	3815	3815	3815
5°	3763	3759	3754
10°	3730	3726	3699
15°	3630	3593	3543
20°	3497	3440	3346
25°	3353	3280	3075
30°	3178	3076	2770
35°	3009	2843	2563
40°	2838	2591	2331
45°	2676	2395	2108
50°	2477	2223	1880
55°	2291	2015	1684
60°	2100	1799	1508
65°	1847	1576	1336
70°	1522	1380	1135
75°	1210	1056	1107
80°	812	762	711
85°	506	608	707

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2676 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	132.0	4.7
10°-20°	362.2	13.0
20°-30°	501.4	18.0
30°-40°	534.6	19.2
40°-50°	487.7	17.5
50°-60°	382.1	13.7
60°-70°	249.0	8.9
70°-80°	110.3	4.0
80°-90°	23.7	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°	995.5	35.8
0°-40°	1530.1	55.0
0°-60°	2399.9	86.2
0°-90°	2783.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2783.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1418	1418	1418	1418	1418	
5°	1393	1391	1391	1390	1390	132
15°	1303	1303	1290	1277	1272	366
25°	1129	1123	1105	1065	1036	518
35°	916	910	865	800	780	573
45°	703	688	629	577	554	542
55°	488	474	429	379	359	438
65°	290	274	248	252	210	286
75°	116	108	102	97	106	125
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°	1417.6	1417.6	1417.6	1417.6	1417.6
2.5°	1407.8	1407.8	1407.8	1406.2	1406.2
5°	1393.0	1391.4	1391.4	1389.8	1389.8
7.5°	1381.6	1379.9	1378.3	1376.7	1373.4
10°	1365.2	1365.2	1363.5	1355.3	1353.7
12.5°	1339.0	1337.3	1330.8	1319.3	1316.0
15°	1302.9	1302.9	1289.8	1276.7	1271.8
17.5°	1263.6	1261.9	1245.5	1232.4	1225.9
20°	1221.0	1217.7	1201.3	1180.0	1168.5
22.5°	1173.4	1173.4	1153.8	1125.9	1114.4
25°	1129.2	1122.6	1104.6	1065.3	1035.8
27.5°	1078.4	1068.5	1048.9	993.2	958.7
30°	1022.7	1017.7	989.9	917.8	891.5
32.5°	970.2	962.0	932.5	857.1	835.8
35°	916.1	909.6	865.3	799.8	780.1
37.5°	862.0	853.9	798.1	745.7	721.1
40°	808.0	798.1	737.5	690.0	663.7
42.5°	757.2	744.0	685.0	634.2	604.7
45°	703.1	688.3	629.3	576.9	553.9
47.5°	649.0	635.9	581.8	527.7	501.5
50°	591.6	580.2	531.0	476.9	449.1
52.5°	544.1	526.1	478.6	424.5	401.5
55°	488.4	473.6	429.4	378.6	358.9
57.5°	437.6	422.8	381.9	334.3	317.9
60°	390.1	368.7	334.3	293.4	280.2
62.5°	337.6	321.2	291.7	257.3	273.7
65°	290.1	273.7	247.5	252.4	209.8
67.5°	237.6	229.4	206.5	183.6	177.0
70°	193.4	183.6	175.4	150.8	144.2
72.5°	154.1	144.2	132.7	119.6	114.7
75°	116.4	108.2	101.6	96.7	106.5
77.5°	80.3	77.0	72.1	67.2	65.6
80°	52.4	50.8	49.2	47.5	45.9
82.5°	31.1	31.1	31.1	31.1	31.1
85°	16.4	18.0	19.7	21.3	22.9
87.5°	9.8	9.8	11.5	13.1	14.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)