

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: P561136

Luminaire Tested: FSR-12-4-LD4-1STD-35-UNV-80-84-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561136
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-35-UNV-80-84-EDD-90
Description: 1X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .125 CLEAR PC ENVIRONM
SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2779.0 lumens
Efficiency: N/A
Efficacy: 83.5 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

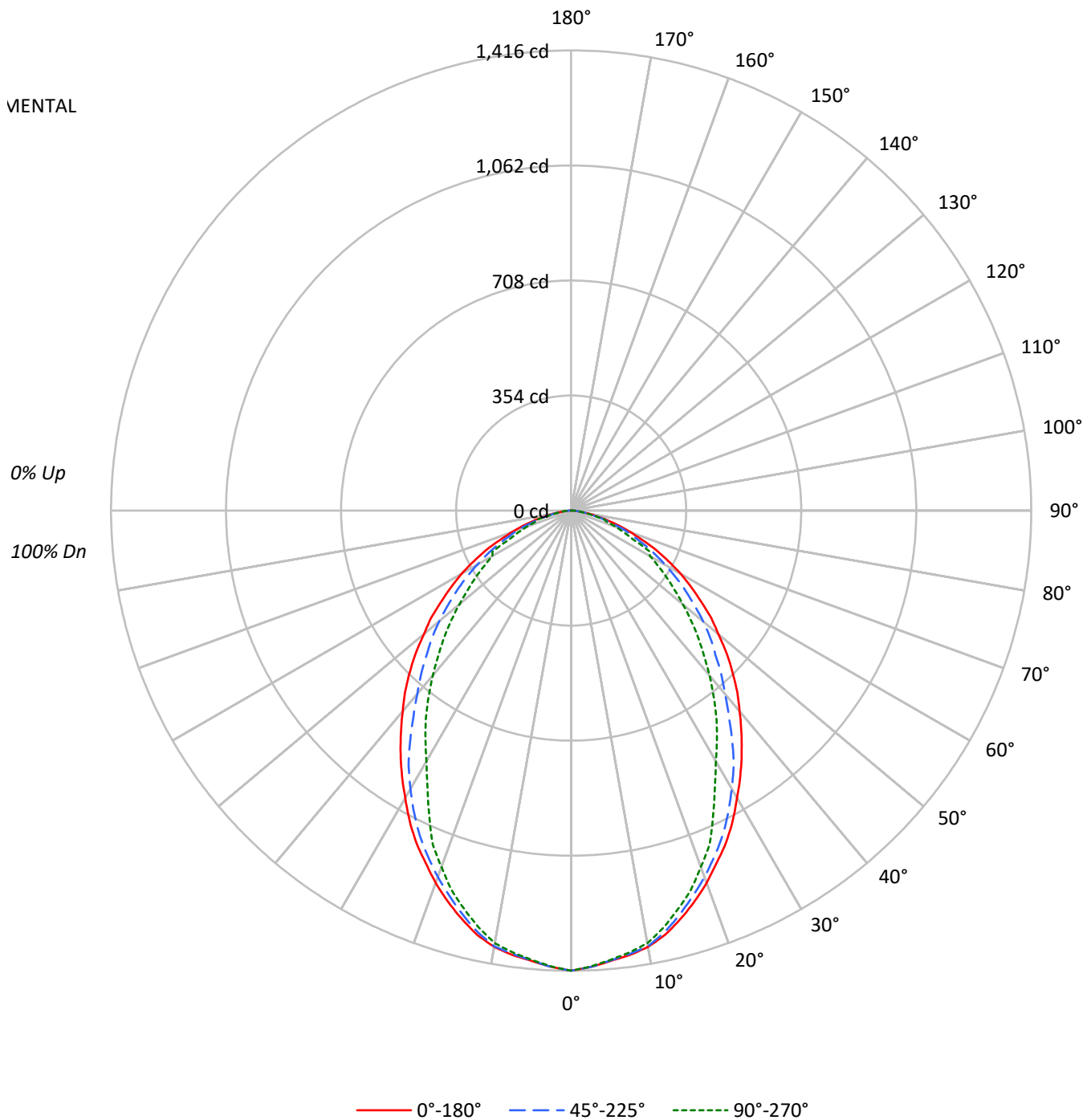
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87									87																			
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75									75																			
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65									65																			
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56									56																			
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50									50																			
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44									44																			
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40									40																			
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36									36																			
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33									33																			
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30									30																			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3809	3809	3809
5°	3757	3753	3749
10°	3725	3721	3694
15°	3624	3588	3538
20°	3491	3435	3341
25°	3348	3275	3071
30°	3173	3072	2766
35°	3005	2839	2559
40°	2834	2587	2328
45°	2672	2391	2105
50°	2473	2220	1877
55°	2288	2012	1681
60°	2096	1796	1506
65°	1845	1573	1334
70°	1519	1378	1133
75°	1208	1055	1106
80°	812	761	710
85°	506	605	707

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2672 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	131.8	4.7
10°-20°	361.6	13.0
20°-30°	500.7	18.0
30°-40°	533.9	19.2
40°-50°	487.0	17.5
50°-60°	381.5	13.7
60°-70°	248.7	8.9
70°-80°	110.2	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°	994.1	35.8
0°-40°	1527.9	55.0
0°-60°	2396.5	86.2
0°-90°	2779.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2779.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1416	1416	1416	1416	1416	
5°	1391	1389	1389	1388	1388	132
15°	1301	1301	1288	1275	1270	366
25°	1128	1121	1103	1064	1034	518
35°	915	908	864	799	779	572
45°	702	687	628	576	553	541
55°	488	473	429	378	358	437
65°	290	273	247	252	210	285
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°	1415.6	1415.6	1415.6	1415.6	1415.6
2.5°	1405.8	1405.8	1405.8	1404.1	1404.1
5°	1391.0	1389.4	1389.4	1387.8	1387.8
7.5°	1379.6	1377.9	1376.3	1374.7	1371.4
10°	1363.2	1363.2	1361.6	1353.4	1351.8
12.5°	1337.0	1335.4	1328.9	1317.4	1314.1
15°	1301.0	1301.0	1287.9	1274.8	1269.9
17.5°	1261.8	1260.1	1243.8	1230.7	1224.1
20°	1219.2	1215.9	1199.6	1178.3	1166.8
22.5°	1171.7	1171.7	1152.1	1124.3	1112.8
25°	1127.6	1121.0	1103.0	1063.7	1034.3
27.5°	1076.8	1067.0	1047.4	991.7	957.4
30°	1021.2	1016.3	988.5	916.4	890.3
32.5°	968.8	960.6	931.2	855.9	834.6
35°	914.8	908.3	864.1	798.6	779.0
37.5°	860.8	852.6	797.0	744.6	720.1
40°	806.8	797.0	736.4	689.0	662.8
42.5°	756.1	743.0	684.1	633.3	603.9
45°	702.1	687.3	628.4	576.1	553.1
47.5°	648.1	635.0	581.0	527.0	500.8
50°	590.8	579.3	530.2	476.2	448.4
52.5°	543.3	525.3	477.9	423.9	400.9
55°	487.7	473.0	428.8	378.0	358.4
57.5°	436.9	422.2	381.3	333.8	317.5
60°	389.5	368.2	333.8	292.9	279.8
62.5°	337.1	320.8	291.3	256.9	273.3
65°	289.7	273.3	247.1	252.0	209.5
67.5°	237.3	229.1	206.2	183.3	176.7
70°	193.1	183.3	175.1	150.6	144.0
72.5°	153.8	144.0	132.6	119.5	114.6
75°	116.2	108.0	101.5	96.6	106.4
77.5°	80.2	76.9	72.0	67.1	65.5
80°	52.4	50.7	49.1	47.5	45.8
82.5°	31.1	31.1	31.1	31.1	31.1
85°	16.4	18.0	19.6	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)