

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: P590392

Luminaire Tested: FSR-24-2-LD4-2STD-50-UNV-80-87-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590392
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
Product Line: FAIL-SAFE
Catalog Number: FSR-24-2-LD4-2STD-50-UNV-80-87-EDD
Description: 2X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR PC ENVIRON
SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3758.0 lumens
Efficiency: N/A
Efficacy: 112.9 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

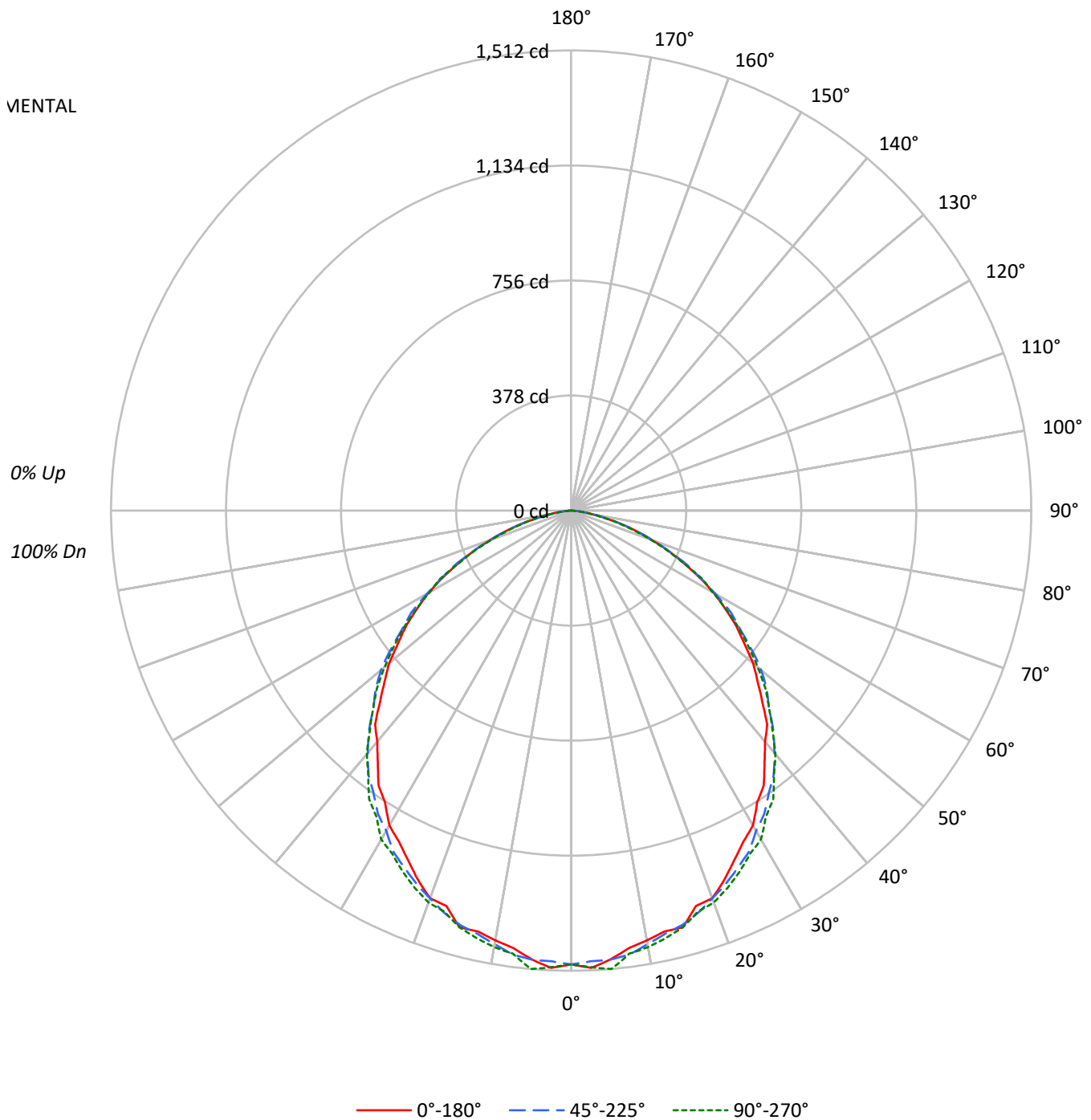
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	4013	4013	4013
5°	3999	4001	4085
10°	3918	3952	3980
15°	3949	3928	3950
20°	3882	3882	3924
25°	3763	3845	3888
30°	3711	3777	3877
35°	3624	3719	3802
40°	3483	3651	3667
45°	3377	3498	3503
50°	3267	3414	3349
55°	3112	3173	3150
60°	2911	2940	2887
65°	2595	2662	2577
70°	2227	2234	2172
75°	1763	1759	1692
80°	1181	1148	1103
85°	642	636	596

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 3588 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	140.3	3.7
10°-20°	397.5	10.6
20°-30°	595.6	15.8
30°-40°	705.8	18.8
40°-50°	707.2	18.8
50°-60°	600.2	16.0
60°-70°	404.7	10.8
70°-80°	177.8	4.7
80°-90°	28.9	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°	1133.3	30.2
0°-40°	1839.2	48.9
0°-60°	3146.6	83.7
0°-90°	3758.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3758.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1491	1491	1491	1491	1491	
5°	1480	1477	1481	1477	1512	140
15°	1418	1401	1410	1417	1418	395
25°	1267	1274	1295	1312	1309	586
35°	1103	1106	1132	1158	1157	685
45°	888	904	919	943	920	687
55°	663	659	676	672	672	590
65°	408	402	418	402	405	405
75°	170	166	169	157	163	182
85°	21	20	21	20	19	30
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1491.1	1491.1	1491.1	1491.1	1491.1
2.5°	1504.0	1492.6	1482.0	1494.4	1501.9
5°	1480.5	1477.0	1481.1	1476.6	1512.3
7.5°	1450.1	1463.4	1471.1	1466.2	1468.4
10°	1433.9	1429.3	1446.4	1458.4	1456.6
12.5°	1416.6	1423.5	1424.5	1437.4	1438.5
15°	1417.5	1401.2	1409.8	1417.2	1417.7
17.5°	1362.5	1380.2	1386.2	1402.9	1382.1
20°	1355.7	1342.8	1355.7	1372.9	1370.2
22.5°	1314.3	1299.9	1327.6	1342.8	1341.9
25°	1267.4	1274.3	1295.1	1312.0	1309.3
27.5°	1226.2	1234.3	1263.9	1287.2	1272.2
30°	1194.4	1190.4	1215.4	1236.2	1247.7
32.5°	1137.6	1152.2	1181.5	1202.1	1191.1
35°	1103.1	1106.4	1132.0	1158.2	1157.4
37.5°	1042.9	1058.1	1094.1	1101.4	1094.7
40°	991.5	1006.7	1039.2	1047.1	1043.9
42.5°	953.6	956.3	984.2	993.2	978.8
45°	887.5	904.1	919.1	942.8	920.4
47.5°	831.3	839.0	871.4	877.7	866.0
50°	780.3	783.0	815.5	807.6	799.9
52.5°	716.2	727.5	745.8	744.3	735.2
55°	663.4	659.0	676.3	671.7	671.5
57.5°	600.1	607.8	622.0	614.7	603.0
60°	540.8	541.0	546.2	537.9	536.4
62.5°	474.8	477.1	478.2	468.0	484.6
65°	407.6	402.2	418.0	402.0	404.7
67.5°	345.8	348.5	346.9	336.9	340.8
70°	283.0	286.5	284.0	272.6	276.1
72.5°	225.6	221.4	224.1	209.8	216.4
75°	169.6	166.1	169.2	157.3	162.7
77.5°	115.5	118.2	116.3	109.9	113.6
80°	76.2	74.1	74.1	70.5	71.2
82.5°	44.5	42.4	41.8	40.6	42.4
85°	20.8	20.2	20.6	20.0	19.3
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)