

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: P590153

Luminaire Tested: FSR-24-2-LD4-2HI-35-UNV-82-88-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590153
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-LD4-2HI-35-UNV-82-88-EDD
Description: 2X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3759.0 lumens
Efficiency: N/A
Efficacy: 87.0 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

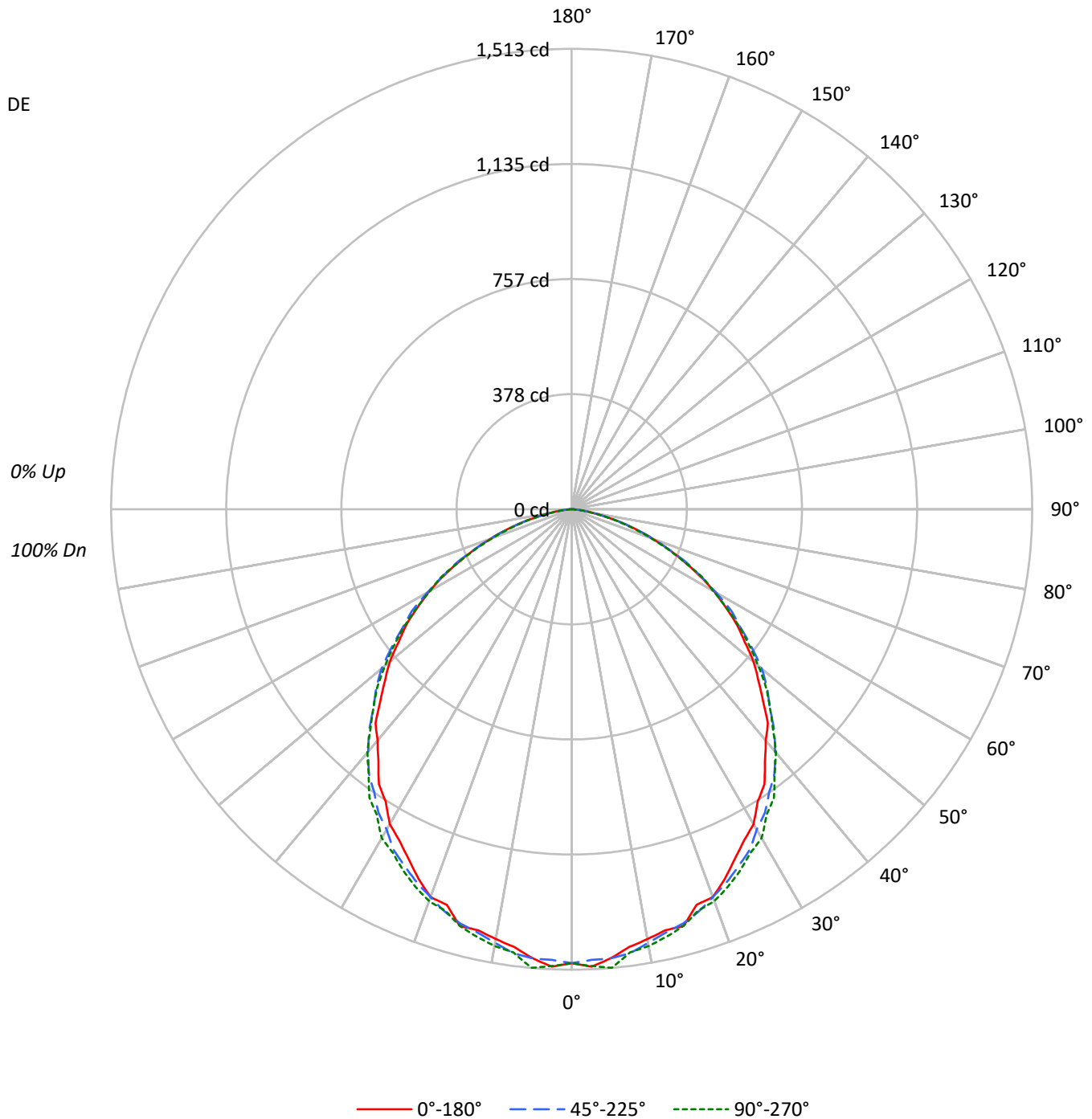
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20																		
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																												
1	110	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86																												
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73																												
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62																												
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53																												
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46																												
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41																												
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36																												
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32																												
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29																												
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26																												

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4014	4014	4014
5°	4000	4002	4086
10°	3919	3953	3981
15°	3950	3929	3951
20°	3883	3883	3925
25°	3764	3846	3889
30°	3712	3778	3878
35°	3625	3720	3803
40°	3484	3652	3668
45°	3379	3499	3504
50°	3268	3415	3350
55°	3113	3174	3151
60°	2911	2940	2887
65°	2596	2662	2578
70°	2227	2234	2172
75°	1764	1760	1692
80°	1182	1148	1105
85°	642	636	596

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 3589 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	140.3	3.7
10°-20°	397.6	10.6
20°-30°	595.7	15.8
30°-40°	706.0	18.8
40°-50°	707.3	18.8
50°-60°	600.4	16.0
60°-70°	404.8	10.8
70°-80°	177.9	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°	1133.6	30.2
0°-40°	1839.6	48.9
0°-60°	3147.4	83.7
0°-90°	3759.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3759.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1492	1492	1492	1492	1492	
5°	1481	1477	1482	1477	1513	140
15°	1418	1402	1410	1418	1418	395
25°	1268	1275	1295	1312	1310	586
35°	1103	1107	1132	1158	1158	685
45°	888	904	919	943	921	687
55°	664	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°	1491.5	1491.5	1491.5	1491.5	1491.5
2.5°	1504.4	1493.0	1482.4	1494.7	1502.3
5°	1480.9	1477.4	1481.5	1477.0	1512.7
7.5°	1450.5	1463.7	1471.4	1466.6	1468.8
10°	1434.3	1429.7	1446.8	1458.7	1457.0
12.5°	1417.0	1423.9	1424.8	1437.7	1438.9
15°	1417.9	1401.5	1410.2	1417.5	1418.1
17.5°	1362.8	1380.6	1386.5	1403.3	1382.5
20°	1356.1	1343.2	1356.1	1373.2	1370.5
22.5°	1314.7	1300.3	1328.0	1343.2	1342.2
25°	1267.7	1274.6	1295.4	1312.4	1309.7
27.5°	1226.5	1234.6	1264.2	1287.5	1272.5
30°	1194.7	1190.7	1215.7	1236.5	1248.1
32.5°	1137.9	1152.5	1181.8	1202.4	1191.4
35°	1103.4	1106.7	1132.3	1158.5	1157.7
37.5°	1043.2	1058.4	1094.4	1101.7	1095.0
40°	991.7	1007.0	1039.5	1047.4	1044.1
42.5°	953.8	956.5	984.4	993.5	979.0
45°	887.8	904.3	919.3	943.0	920.7
47.5°	831.5	839.2	871.6	877.9	866.2
50°	780.5	783.2	815.7	807.8	800.1
52.5°	716.4	727.7	746.0	744.5	735.4
55°	663.6	659.2	676.5	671.9	671.7
57.5°	600.2	608.0	622.2	614.9	603.1
60°	540.9	541.1	546.3	538.0	536.5
62.5°	474.9	477.2	478.4	468.1	484.7
65°	407.7	402.3	418.1	402.1	404.8
67.5°	345.9	348.6	347.0	337.0	340.9
70°	283.1	286.5	284.0	272.7	276.1
72.5°	225.7	221.5	224.2	209.9	216.5
75°	169.7	166.2	169.3	157.3	162.7
77.5°	115.5	118.2	116.3	110.0	113.6
80°	76.3	74.1	74.1	70.5	71.3
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)