

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: P590405

Luminaire Tested: FSR-24-2-LD4-2STD-50-UNV-82-84-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590405
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-82-84-EDD
Description: 2X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3728.0 lumens
Efficiency: N/A
Efficacy: 112.0 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

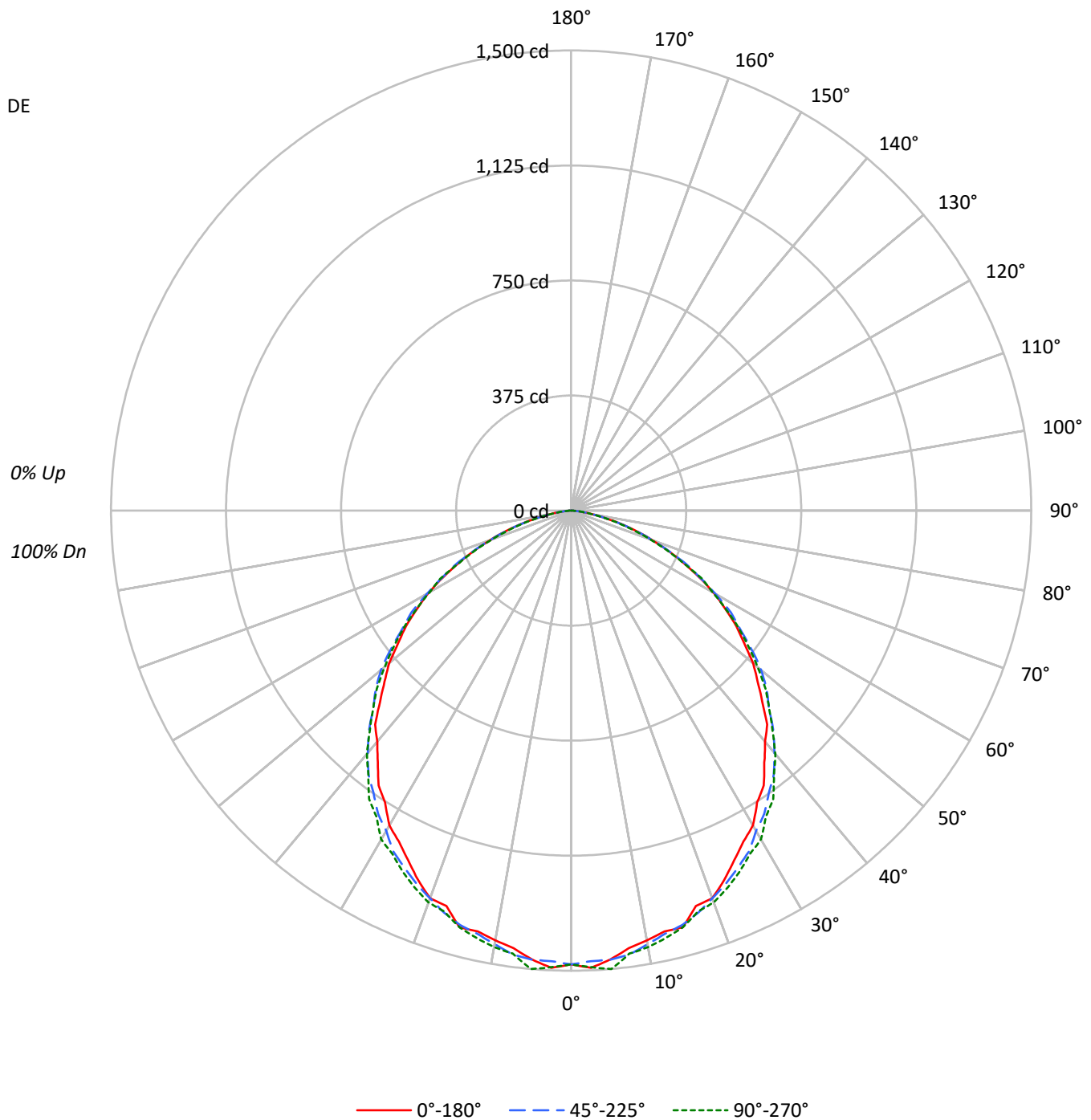
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	3980	3980	3980
5°	3967	3969	4052
10°	3887	3921	3948
15°	3918	3896	3918
20°	3851	3851	3892
25°	3733	3815	3857
30°	3682	3746	3846
35°	3595	3689	3772
40°	3455	3621	3638
45°	3350	3470	3475
50°	3241	3387	3322
55°	3088	3148	3126
60°	2887	2916	2864
65°	2574	2640	2556
70°	2209	2216	2155
75°	1750	1746	1678
80°	1172	1139	1096
85°	636	630	590

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 3559 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	139.1	3.7
10°-20°	394.3	10.6
20°-30°	590.8	15.8
30°-40°	700.2	18.8
40°-50°	701.5	18.8
50°-60°	595.5	16.0
60°-70°	401.5	10.8
70°-80°	176.4	4.7
80°-90°	28.7	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°	1124.3	30.2
0°-40°	1824.5	48.9
0°-60°	3121.5	83.7
0°-90°	3728.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3728.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1479	1479	1479	1479	1479	
5°	1469	1465	1469	1465	1500	138
15°	1406	1390	1399	1406	1406	392
25°	1257	1264	1285	1302	1299	581
35°	1094	1098	1123	1149	1148	679
45°	880	897	912	935	913	681
55°	658	654	671	666	666	585
65°	404	399	415	399	401	402
75°	168	165	168	156	161	180
85°	21	20	20	20	19	30
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1479.2	1479.2	1479.2	1479.2	1479.2
2.5°	1492.0	1480.7	1470.2	1482.4	1489.9
5°	1468.7	1465.2	1469.2	1464.9	1500.2
7.5°	1438.5	1451.7	1459.3	1454.5	1456.6
10°	1422.5	1417.9	1434.9	1446.7	1445.0
12.5°	1405.3	1412.1	1413.1	1425.9	1427.0
15°	1406.2	1390.0	1398.6	1405.8	1406.4
17.5°	1351.6	1369.2	1375.1	1391.7	1371.1
20°	1344.9	1332.1	1344.9	1361.9	1359.2
22.5°	1303.9	1289.5	1317.0	1332.1	1331.2
25°	1257.3	1264.1	1284.8	1301.6	1298.9
27.5°	1216.4	1224.4	1253.8	1276.9	1262.0
30°	1184.9	1180.9	1205.7	1226.3	1237.8
32.5°	1128.5	1143.0	1172.1	1192.5	1181.6
35°	1094.3	1097.6	1123.0	1149.0	1148.2
37.5°	1034.6	1049.7	1085.4	1092.6	1085.9
40°	983.6	998.7	1030.9	1038.8	1035.5
42.5°	945.9	948.6	976.3	985.3	971.0
45°	880.4	896.9	911.8	935.3	913.1
47.5°	824.7	832.3	864.4	870.7	859.0
50°	774.1	776.7	809.0	801.2	793.5
52.5°	710.5	721.7	739.9	738.3	729.4
55°	658.1	653.7	670.9	666.3	666.2
57.5°	595.3	602.9	617.1	609.8	598.2
60°	536.5	536.7	541.8	533.6	532.1
62.5°	471.0	473.3	474.4	464.3	480.7
65°	404.3	399.0	414.6	398.8	401.4
67.5°	343.0	345.7	344.2	334.2	338.0
70°	280.7	284.2	281.7	270.4	273.9
72.5°	223.8	219.6	222.3	208.2	214.7
75°	168.3	164.8	167.9	156.0	161.4
77.5°	114.6	117.3	115.4	109.1	112.7
80°	75.6	73.5	73.5	69.9	70.7
82.5°	44.1	42.0	41.4	40.3	42.0
85°	20.6	20.1	20.4	19.9	19.1
87.5°	7.4	7.6	7.6	7.3	6.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)