

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: P590598

Luminaire Tested: FSR-24-2-LD4-3LO-50-UNV-82-85-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590598
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-LD4-3LO-50-UNV-82-85-EDD
Description: 2X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4093.0 lumens
Efficiency: N/A
Efficacy: 116.6 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

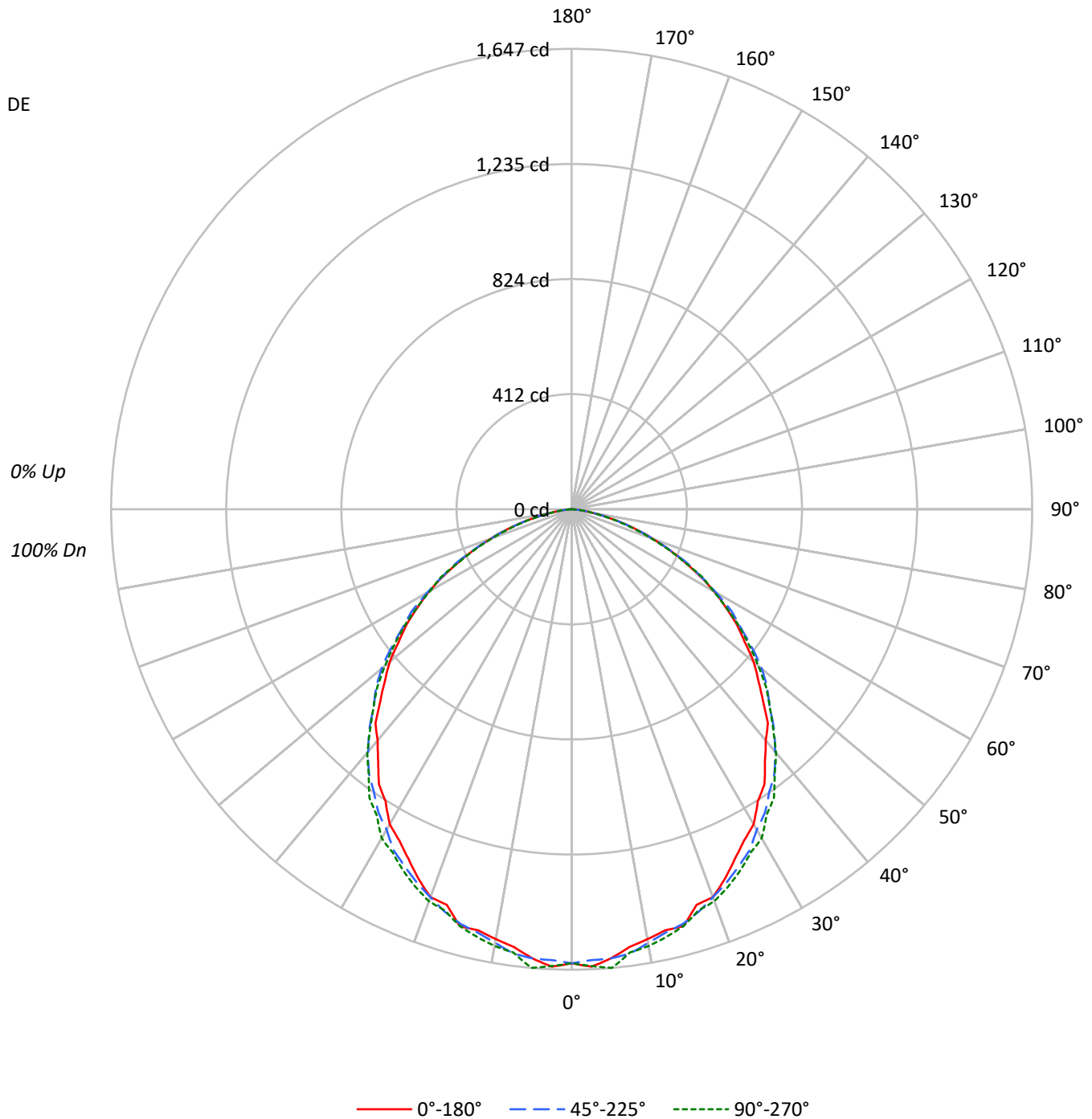
Input Watts (W): 35.1
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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				
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°	4370	4370	4370
5°	4356	4357	4449
10°	4267	4305	4335
15°	4301	4278	4302
20°	4229	4229	4273
25°	4098	4188	4234
30°	4042	4113	4223
35°	3947	4050	4141
40°	3793	3976	3994
45°	3679	3809	3815
50°	3558	3718	3647
55°	3390	3456	3431
60°	3170	3202	3144
65°	2826	2898	2807
70°	2425	2434	2366
75°	1920	1916	1842
80°	1286	1251	1203
85°	698	692	648

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 3908 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	152.8	3.7
10°-20°	432.9	10.6
20°-30°	648.6	15.8
30°-40°	768.8	18.8
40°-50°	770.2	18.8
50°-60°	653.8	16.0
60°-70°	440.8	10.8
70°-80°	193.7	4.7
80°-90°	31.5	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°	1234.4	30.2
0°-40°	2003.1	48.9
0°-60°	3427.1	83.7
0°-90°	4093.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4093.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1624	1624	1624	1624	1624	
5°	1612	1609	1613	1608	1647	152
15°	1544	1526	1536	1544	1544	430
25°	1380	1388	1410	1429	1426	638
35°	1202	1205	1233	1262	1261	746
45°	967	985	1001	1027	1002	748
55°	723	718	737	732	731	643
65°	444	438	455	438	441	441
75°	185	181	184	171	177	198
85°	23	22	22	22	21	33
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1624.0	1624.0	1624.0	1624.0	1624.0
2.5°	1638.0	1625.7	1614.1	1627.6	1635.7
5°	1612.5	1608.7	1613.1	1608.3	1647.1
7.5°	1579.3	1593.8	1602.2	1596.9	1599.3
10°	1561.7	1556.7	1575.4	1588.4	1586.5
12.5°	1542.9	1550.4	1551.4	1565.5	1566.8
15°	1543.9	1526.1	1535.5	1543.5	1544.1
17.5°	1483.9	1503.2	1509.7	1528.0	1505.3
20°	1476.6	1462.5	1476.6	1495.3	1492.3
22.5°	1431.5	1415.8	1446.0	1462.5	1461.5
25°	1380.3	1387.9	1410.5	1429.0	1426.1
27.5°	1335.5	1344.3	1376.6	1401.9	1385.6
30°	1300.9	1296.5	1323.7	1346.4	1359.0
32.5°	1239.0	1255.0	1286.8	1309.3	1297.3
35°	1201.5	1205.1	1232.9	1261.5	1260.6
37.5°	1135.9	1152.4	1191.6	1199.6	1192.3
40°	1079.9	1096.4	1131.9	1140.5	1136.9
42.5°	1038.6	1041.5	1071.9	1081.8	1066.0
45°	966.6	984.7	1001.0	1026.8	1002.5
47.5°	905.4	913.8	949.0	955.9	943.2
50°	849.8	852.8	888.2	879.6	871.2
52.5°	780.0	792.4	812.3	810.6	800.8
55°	722.6	717.7	736.6	731.6	731.4
57.5°	653.6	662.0	677.5	669.5	656.7
60°	589.0	589.2	594.9	585.9	584.2
62.5°	517.1	519.6	520.9	509.7	527.8
65°	443.9	438.0	455.2	437.8	440.8
67.5°	376.6	379.5	377.8	366.9	371.1
70°	308.2	312.0	309.3	296.9	300.7
72.5°	245.7	241.1	244.1	228.6	235.7
75°	184.7	181.0	184.3	171.3	177.2
77.5°	125.8	128.7	126.6	119.7	123.7
80°	83.0	80.7	80.7	76.7	77.6
82.5°	48.4	46.1	45.5	44.2	46.1
85°	22.6	22.0	22.4	21.8	21.0
87.5°	8.2	8.4	8.4	8.0	7.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)