

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: P590665

Luminaire Tested: FSR-24-2-LD4-3STD-40-UNV-82-88-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590665
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-LD4-3STD-40-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 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4643.0 lumens
Efficiency: N/A
Efficacy: 92.9 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

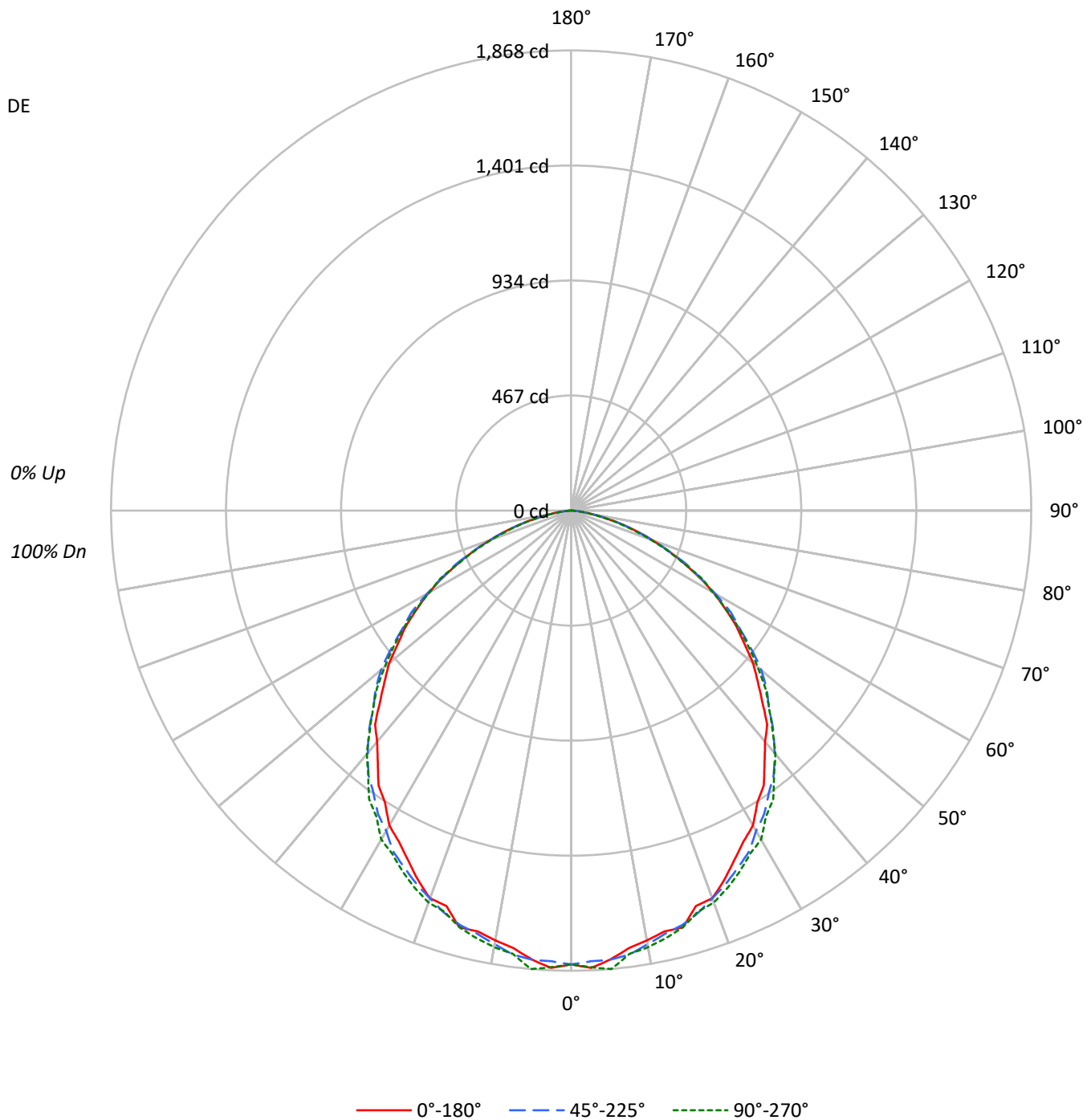
Input Watts (W): 50
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	4957	4957	4957
5°	4941	4943	5047
10°	4841	4883	4917
15°	4879	4852	4880
20°	4797	4797	4848
25°	4649	4751	4803
30°	4585	4666	4790
35°	4477	4595	4698
40°	4303	4510	4530
45°	4173	4321	4328
50°	4036	4218	4137
55°	3846	3920	3893
60°	3596	3632	3567
65°	3206	3288	3184
70°	2751	2760	2684
75°	2179	2174	2090
80°	1460	1420	1364
85°	794	787	735

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 4433 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	173.3	3.7
10°-20°	491.1	10.6
20°-30°	735.8	15.8
30°-40°	872.1	18.8
40°-50°	873.7	18.8
50°-60°	741.6	16.0
60°-70°	500.0	10.8
70°-80°	219.7	4.7
80°-90°	35.7	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°	1400.2	30.2
0°-40°	2272.3	48.9
0°-60°	3887.6	83.7
0°-90°	4643.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4643.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1842	1842	1842	1842	1842	
5°	1829	1825	1830	1824	1868	172
15°	1751	1731	1742	1751	1752	488
25°	1566	1574	1600	1621	1618	724
35°	1363	1367	1399	1431	1430	846
45°	1096	1117	1136	1165	1137	848
55°	820	814	836	830	830	729
65°	504	497	516	497	500	501
75°	210	205	209	194	201	225
85°	26	25	26	25	24	37
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1842.2	1842.2	1842.2	1842.2	1842.2
2.5°	1858.2	1844.1	1831.0	1846.3	1855.5
5°	1829.1	1824.9	1829.9	1824.4	1868.4
7.5°	1791.6	1808.0	1817.5	1811.5	1814.2
10°	1771.6	1765.9	1787.0	1801.8	1799.6
12.5°	1750.2	1758.7	1759.9	1775.9	1777.3
15°	1751.4	1731.1	1741.8	1750.9	1751.6
17.5°	1683.3	1705.2	1712.6	1733.3	1707.6
20°	1675.0	1659.1	1675.0	1696.2	1692.8
22.5°	1623.9	1606.0	1640.3	1659.1	1657.9
25°	1565.8	1574.4	1600.1	1621.0	1617.7
27.5°	1514.9	1524.9	1561.6	1590.3	1571.8
30°	1475.7	1470.7	1501.6	1527.3	1541.6
32.5°	1405.5	1423.6	1459.7	1485.2	1471.6
35°	1362.9	1367.0	1398.6	1431.0	1430.0
37.5°	1288.5	1307.3	1351.8	1360.8	1352.5
40°	1225.0	1243.8	1284.0	1293.7	1289.7
42.5°	1178.1	1181.5	1215.9	1227.1	1209.3
45°	1096.5	1117.0	1135.5	1164.8	1137.2
47.5°	1027.1	1036.6	1076.6	1084.4	1069.9
50°	964.0	967.4	1007.6	997.8	988.3
52.5°	884.8	898.9	921.5	919.6	908.4
55°	819.7	814.2	835.6	829.9	829.7
57.5°	741.4	750.9	768.5	759.5	745.0
60°	668.1	668.4	674.8	664.6	662.7
62.5°	586.6	589.4	590.8	578.2	598.7
65°	503.5	496.9	516.4	496.7	500.0
67.5°	427.2	430.5	428.6	416.3	421.0
70°	349.7	353.9	350.8	336.8	341.1
72.5°	278.8	273.5	276.9	259.3	267.4
75°	209.6	205.3	209.1	194.3	201.0
77.5°	142.7	146.0	143.7	135.8	140.3
80°	94.2	91.6	91.6	87.1	88.0
82.5°	54.9	52.3	51.6	50.2	52.3
85°	25.7	25.0	25.5	24.7	23.8
87.5°	9.3	9.5	9.5	9.0	8.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)