

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: P562439

Luminaire Tested: FSR-24-4-LD4-1STD-50-UNV-81-87-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562439
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-5)
Test Lab: INNOVATION CENTER
Issue Date: 7/20/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-24-4-LD4-1STD-50-UNV-81-87-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3570.0 lumens
Efficiency: N/A
Efficacy: 107.2 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

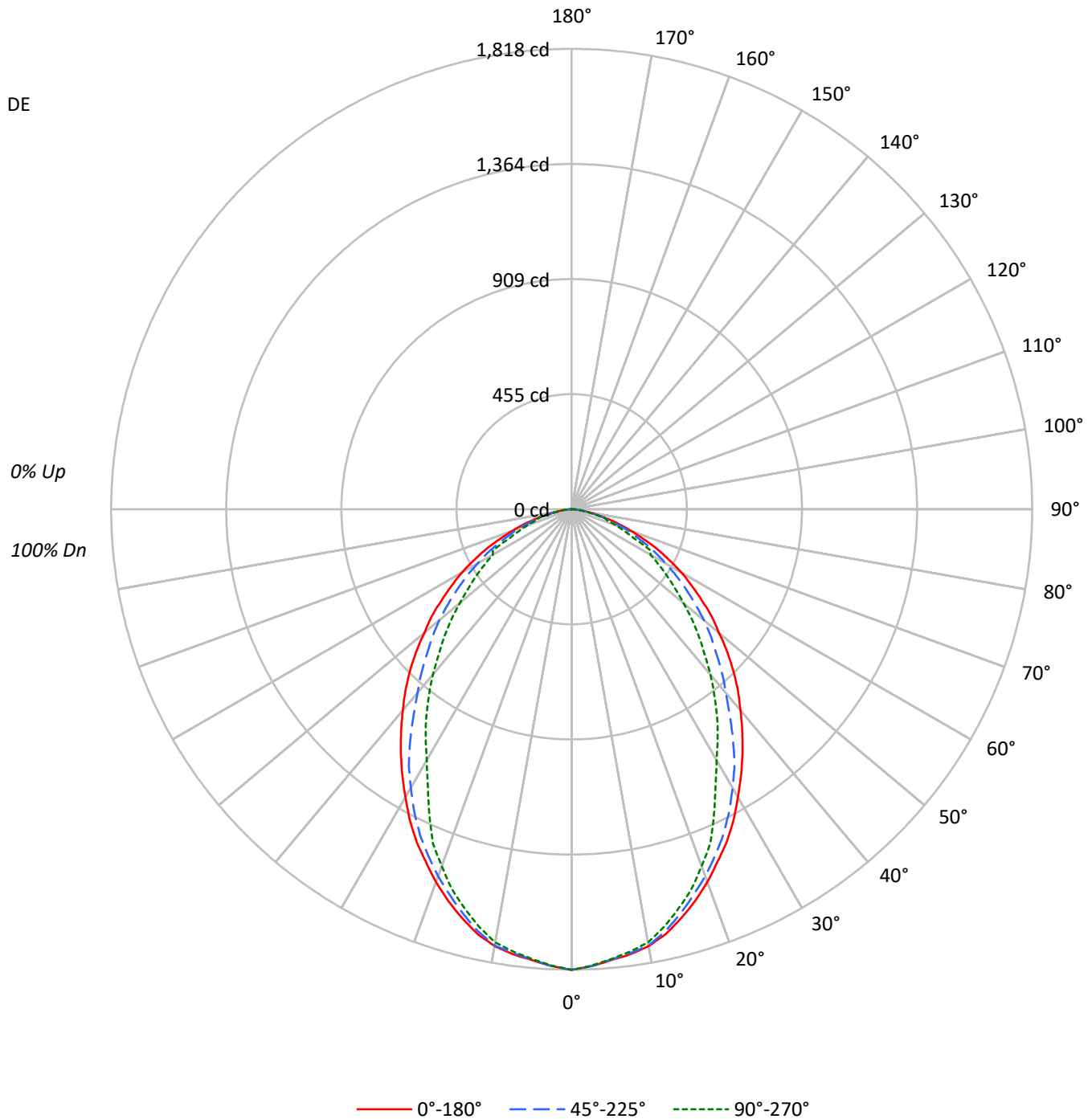
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87																												
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75																												
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65																												
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56																												
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50																												
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44																												
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40																												
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36																												
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33																												
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30																												

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2447	2447	2447
5°	2414	2411	2408
10°	2393	2390	2372
15°	2328	2305	2272
20°	2243	2206	2146
25°	2150	2104	1973
30°	2038	1973	1777
35°	1930	1823	1644
40°	1820	1662	1495
45°	1716	1536	1352
50°	1589	1426	1206
55°	1470	1292	1080
60°	1347	1154	967
65°	1185	1011	857
70°	976	885	728
75°	776	677	711
80°	521	489	456
85°	324	389	454

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1716 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	169.3	4.7
10°-20°	464.6	13.0
20°-30°	643.2	18.0
30°-40°	685.8	19.2
40°-50°	625.7	17.5
50°-60°	490.1	13.7
60°-70°	319.5	8.9
70°-80°	141.5	4.0
80°-90°	30.4	0.9
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°	1277.0	35.8
0°-40°	1962.8	55.0
0°-60°	3078.6	86.2
0°-90°	3570.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3570.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1818	1818	1818	1818	1818	
5°	1787	1785	1785	1783	1783	170
15°	1671	1671	1654	1638	1631	470
25°	1448	1440	1417	1366	1329	665
35°	1175	1167	1110	1026	1001	735
45°	902	883	807	740	711	695
55°	626	608	551	486	460	562
65°	372	351	318	324	269	367
75°	149	139	130	124	137	160
85°	21	23	25	27	29	29
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1818.5	1818.5	1818.5	1818.5	1818.5
2.5°	1805.9	1805.9	1805.9	1803.8	1803.8
5°	1787.0	1784.9	1784.9	1782.8	1782.8
7.5°	1772.3	1770.2	1768.1	1766.0	1761.7
10°	1751.2	1751.2	1749.1	1738.6	1736.5
12.5°	1717.6	1715.5	1707.1	1692.4	1688.2
15°	1671.3	1671.3	1654.5	1637.7	1631.4
17.5°	1620.9	1618.8	1597.8	1580.9	1572.5
20°	1566.2	1562.0	1541.0	1513.7	1499.0
22.5°	1505.3	1505.3	1480.0	1444.3	1429.6
25°	1448.5	1440.1	1417.0	1366.5	1328.7
27.5°	1383.3	1370.7	1345.5	1274.0	1229.9
30°	1311.9	1305.5	1269.8	1177.3	1143.7
32.5°	1244.6	1234.1	1196.2	1099.5	1072.2
35°	1175.2	1166.8	1110.0	1025.9	1000.7
37.5°	1105.8	1095.3	1023.8	956.6	925.0
40°	1036.4	1023.8	946.0	885.1	851.4
42.5°	971.3	954.5	878.8	813.6	775.8
45°	901.9	883.0	807.3	740.0	710.6
47.5°	832.5	815.7	746.3	676.9	643.3
50°	758.9	744.2	681.2	611.8	576.0
52.5°	698.0	674.8	613.9	544.5	515.1
55°	626.5	607.6	550.8	485.6	460.4
57.5°	561.3	542.4	489.8	428.9	407.9
60°	500.4	473.0	428.9	376.3	359.5
62.5°	433.1	412.1	374.2	330.1	351.1
65°	372.1	351.1	317.5	323.8	269.1
67.5°	304.8	294.3	264.9	235.5	227.1
70°	248.1	235.5	224.9	193.4	185.0
72.5°	197.6	185.0	170.3	153.5	147.2
75°	149.3	138.8	130.3	124.0	136.7
77.5°	103.0	98.8	92.5	86.2	84.1
80°	67.3	65.2	63.1	61.0	58.9
82.5°	39.9	39.9	39.9	39.9	39.9
85°	21.0	23.1	25.2	27.3	29.4
87.5°	12.6	12.6	14.7	16.8	18.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)