

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: P562012

Luminaire Tested: FSR-24-4-LD4-1HI-35-UNV-82-96-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562012
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-LD4-1HI-35-UNV-82-96-EDD-90
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3692.0 lumens
Efficiency: N/A
Efficacy: 85.5 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

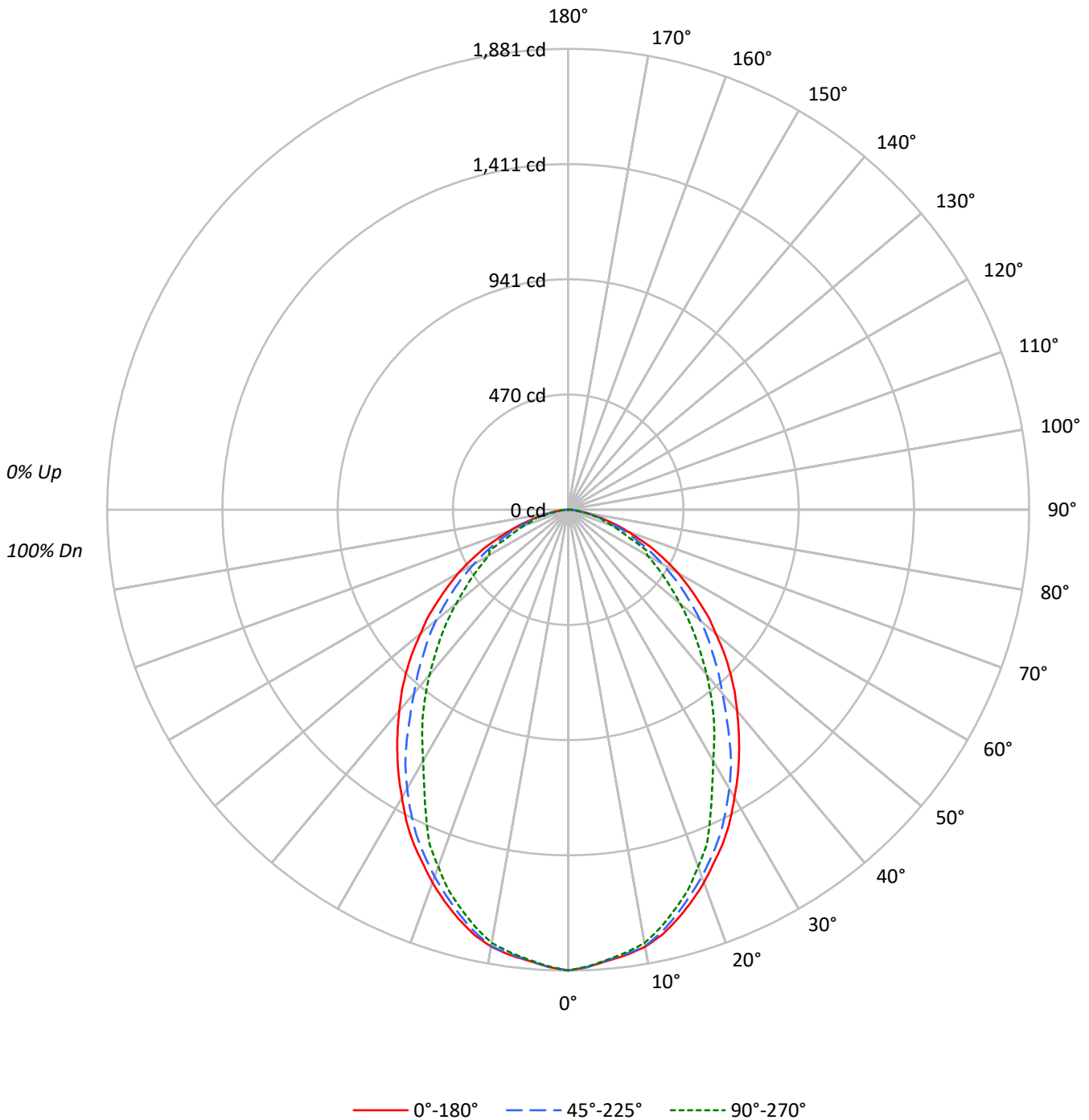
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									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°	2530	2530	2530
5°	2496	2493	2490
10°	2474	2471	2454
15°	2408	2383	2350
20°	2319	2282	2220
25°	2224	2176	2040
30°	2108	2040	1837
35°	1996	1886	1700
40°	1883	1718	1547
45°	1775	1589	1398
50°	1643	1474	1247
55°	1520	1336	1117
60°	1393	1193	1001
65°	1225	1045	886
70°	1009	915	753
75°	803	701	735
80°	539	505	472
85°	335	403	469

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1775 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	175.1	4.7
10°-20°	480.5	13.0
20°-30°	665.1	18.0
30°-40°	709.2	19.2
40°-50°	647.0	17.5
50°-60°	506.9	13.7
60°-70°	330.4	8.9
70°-80°	146.4	4.0
80°-90°	31.4	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°	1320.7	35.8
0°-40°	2029.9	55.0
0°-60°	3183.8	86.2
0°-90°	3692.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3692.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1881	1881	1881	1881	1881	
5°	1848	1846	1846	1844	1844	175
15°	1728	1728	1711	1694	1687	486
25°	1498	1489	1465	1413	1374	688
35°	1215	1207	1148	1061	1035	760
45°	933	913	835	765	735	718
55°	648	628	570	502	476	581
65°	385	363	328	335	278	379
75°	154	144	135	128	141	165
85°	22	24	26	28	30	30
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1880.7	1880.7	1880.7	1880.7	1880.7
2.5°	1867.6	1867.6	1867.6	1865.4	1865.4
5°	1848.0	1845.9	1845.9	1843.7	1843.7
7.5°	1832.8	1830.6	1828.5	1826.3	1822.0
10°	1811.1	1811.1	1808.9	1798.0	1795.9
12.5°	1776.3	1774.1	1765.4	1750.2	1745.9
15°	1728.5	1728.5	1711.1	1693.7	1687.2
17.5°	1676.3	1674.1	1652.4	1635.0	1626.3
20°	1619.8	1615.4	1593.7	1565.4	1550.2
22.5°	1556.7	1556.7	1530.6	1493.7	1478.4
25°	1498.0	1489.3	1465.4	1413.2	1374.1
27.5°	1430.6	1417.6	1391.5	1317.5	1271.9
30°	1356.7	1350.2	1313.2	1217.5	1182.7
32.5°	1287.1	1276.2	1237.1	1137.1	1108.8
35°	1215.4	1206.7	1148.0	1061.0	1034.9
37.5°	1143.6	1132.7	1058.8	989.2	956.6
40°	1071.9	1058.8	978.4	915.3	880.5
42.5°	1004.5	987.1	908.8	841.4	802.3
45°	932.7	913.2	834.9	765.3	734.9
47.5°	861.0	843.6	771.8	700.1	665.3
50°	784.9	769.7	704.4	632.7	595.7
52.5°	721.8	697.9	634.9	563.1	532.7
55°	647.9	628.3	569.6	502.2	476.1
57.5°	580.5	560.9	506.6	443.5	421.8
60°	517.5	489.2	443.5	389.2	371.8
62.5°	447.9	426.1	387.0	341.3	363.1
65°	384.8	363.1	328.3	334.8	278.3
67.5°	315.3	304.4	273.9	243.5	234.8
70°	256.6	243.5	232.6	200.0	191.3
72.5°	204.4	191.3	176.1	158.7	152.2
75°	154.4	143.5	134.8	128.3	141.3
77.5°	106.5	102.2	95.7	89.1	87.0
80°	69.6	67.4	65.2	63.1	60.9
82.5°	41.3	41.3	41.3	41.3	41.3
85°	21.7	23.9	26.1	28.3	30.4
87.5°	13.0	13.0	15.2	17.4	19.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)