

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: P562461

Luminaire Tested: FSR-24-4-LD4-1STD-50-UNV-82-96-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562461
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-82-96-EDD
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3695.0 lumens
Efficiency: N/A
Efficacy: 111.0 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

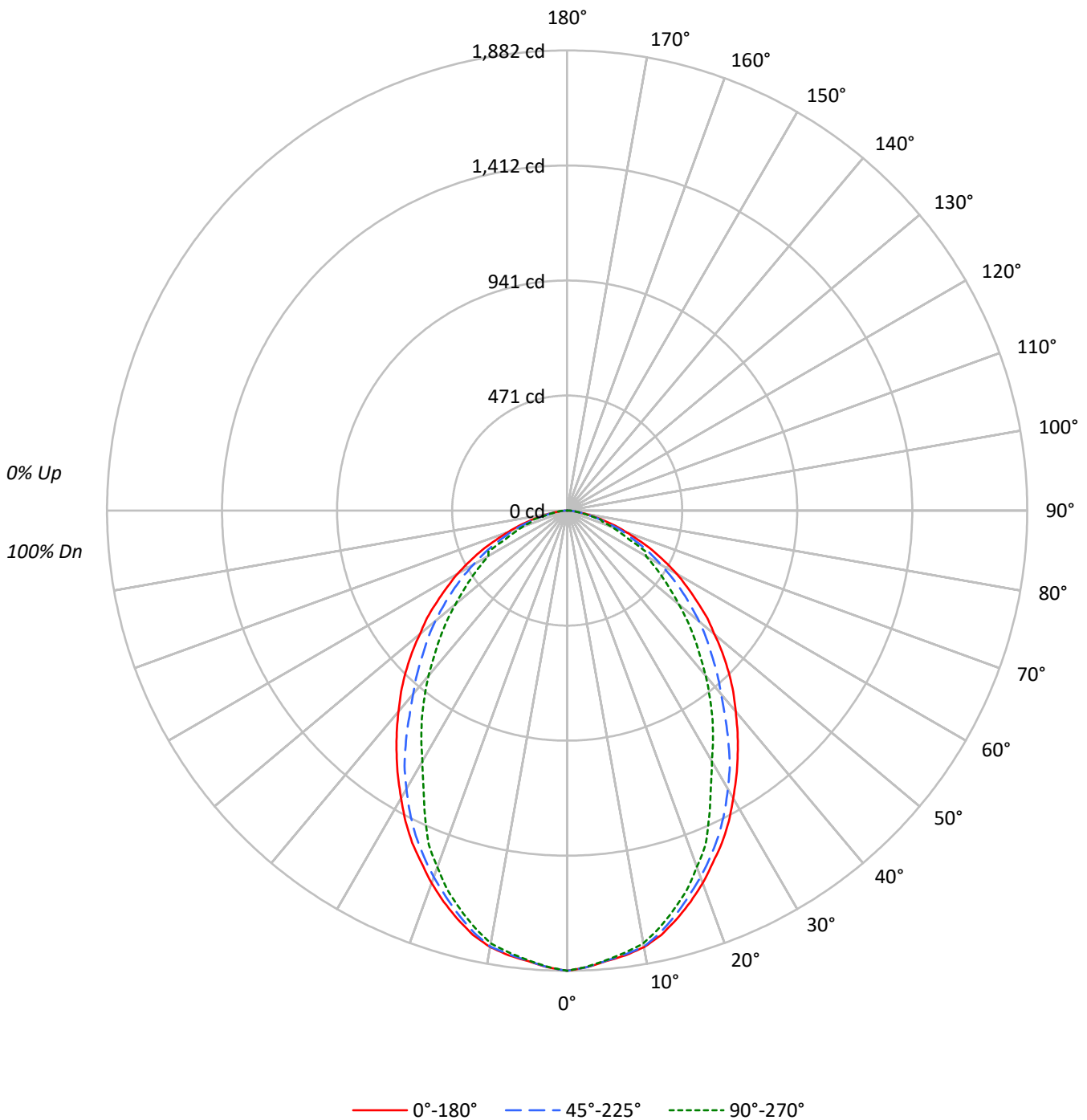
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2532	2532	2532
5°	2498	2495	2492
10°	2476	2473	2456
15°	2410	2385	2352
20°	2321	2284	2221
25°	2226	2177	2042
30°	2110	2042	1839
35°	1998	1887	1701
40°	1884	1720	1548
45°	1776	1590	1400
50°	1644	1476	1248
55°	1521	1337	1118
60°	1394	1195	1001
65°	1226	1046	887
70°	1010	916	753
75°	803	701	735
80°	539	506	472
85°	337	403	471

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1776 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	175.2	4.7
10°-20°	480.8	13.0
20°-30°	665.7	18.0
30°-40°	709.8	19.2
40°-50°	647.6	17.5
50°-60°	507.3	13.7
60°-70°	330.6	8.9
70°-80°	146.5	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°	1321.7	35.8
0°-40°	2031.6	55.0
0°-60°	3186.4	86.2
0°-90°	3695.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3695.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1882	1882	1882	1882	1882	
5°	1850	1847	1847	1845	1845	176
15°	1730	1730	1712	1695	1688	486
25°	1499	1490	1467	1414	1375	688
35°	1216	1208	1149	1062	1036	760
45°	934	914	836	766	736	719
55°	648	629	570	503	476	582
65°	385	363	329	335	278	380
75°	154	144	135	128	141	166
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°	1882.2	1882.2	1882.2	1882.2	1882.2
2.5°	1869.1	1869.1	1869.1	1867.0	1867.0
5°	1849.5	1847.4	1847.4	1845.2	1845.2
7.5°	1834.3	1832.1	1830.0	1827.8	1823.4
10°	1812.6	1812.6	1810.4	1799.5	1797.3
12.5°	1777.7	1775.6	1766.9	1751.6	1747.3
15°	1729.9	1729.9	1712.5	1695.1	1688.5
17.5°	1677.6	1675.5	1653.7	1636.3	1627.6
20°	1621.1	1616.7	1595.0	1566.7	1551.4
22.5°	1558.0	1558.0	1531.9	1494.9	1479.6
25°	1499.2	1490.5	1466.6	1414.4	1375.2
27.5°	1431.8	1418.7	1392.6	1318.6	1272.9
30°	1357.8	1351.3	1314.3	1218.5	1183.7
32.5°	1288.2	1277.3	1238.1	1138.0	1109.7
35°	1216.3	1207.6	1148.9	1061.9	1035.7
37.5°	1144.5	1133.7	1059.7	990.1	957.4
40°	1072.7	1059.7	979.2	916.1	881.3
42.5°	1005.3	987.9	909.5	842.1	802.9
45°	933.5	913.9	835.6	765.9	735.5
47.5°	861.7	844.3	772.5	700.7	665.8
50°	785.5	770.3	705.0	633.2	596.2
52.5°	722.4	698.5	635.4	563.6	533.1
55°	648.4	628.8	570.1	502.6	476.5
57.5°	581.0	561.4	507.0	443.9	422.1
60°	517.9	489.6	443.9	389.5	372.1
62.5°	448.2	426.5	387.3	341.6	363.4
65°	385.1	363.4	328.6	335.1	278.5
67.5°	315.5	304.6	274.2	243.7	235.0
70°	256.8	243.7	232.8	200.2	191.5
72.5°	204.5	191.5	176.3	158.8	152.3
75°	154.5	143.6	134.9	128.4	141.4
77.5°	106.6	102.3	95.7	89.2	87.0
80°	69.6	67.5	65.3	63.1	60.9
82.5°	41.3	41.3	41.3	41.3	41.3
85°	21.8	23.9	26.1	28.3	30.5
87.5°	13.1	13.1	15.2	17.4	19.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)