

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: P562386

Luminaire Tested: FSR-24-4-LD4-1STD-40-UNV-82-85-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562386
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-40-UNV-82-85-EDD-90
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3019.0 lumens
Efficiency: N/A
Efficacy: 90.7 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

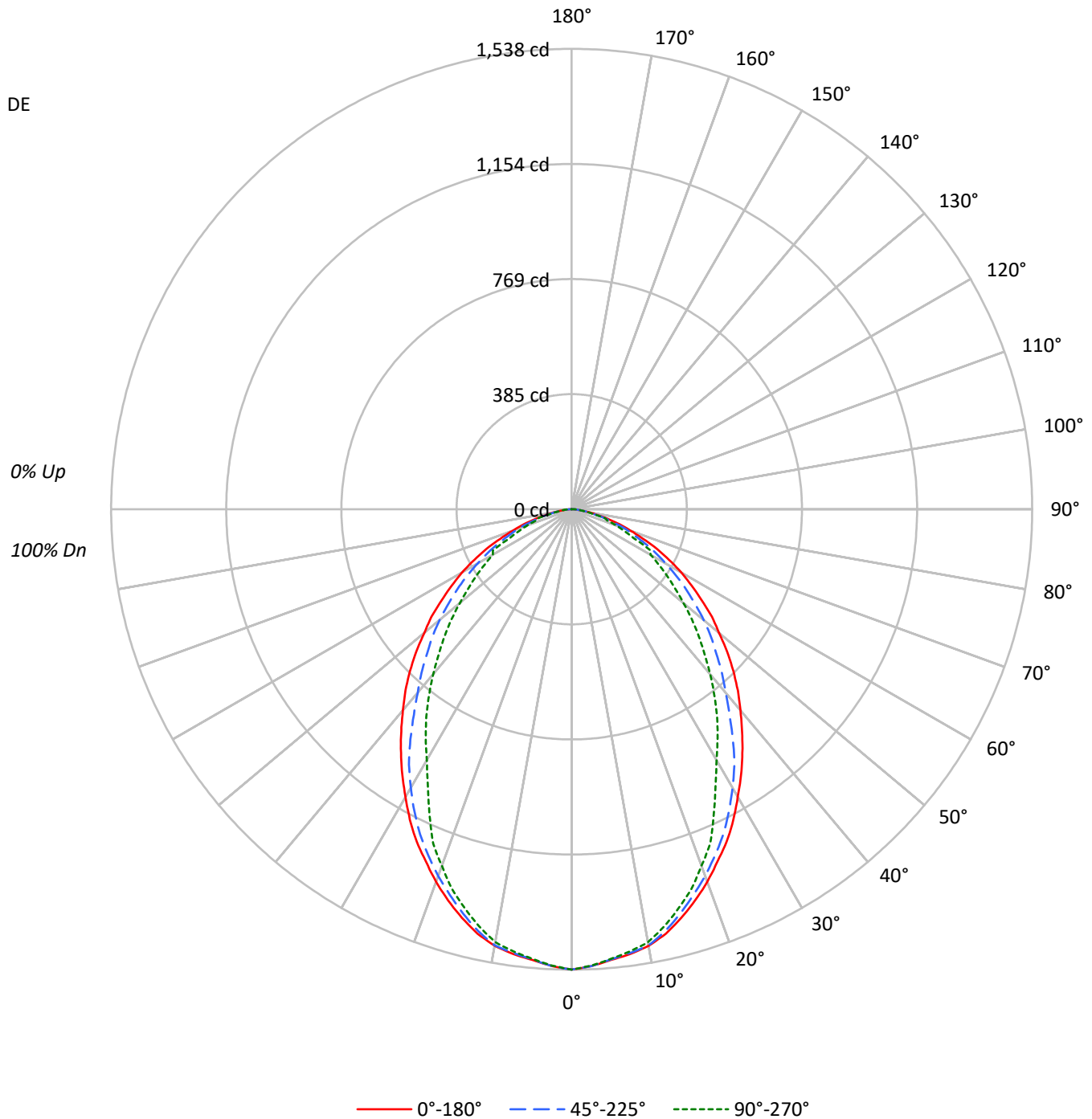
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	2069	2069	2069
5°	2041	2039	2036
10°	2023	2021	2006
15°	1969	1949	1922
20°	1896	1866	1815
25°	1818	1779	1668
30°	1724	1668	1503
35°	1632	1542	1390
40°	1539	1405	1265
45°	1451	1299	1143
50°	1343	1206	1020
55°	1243	1093	913
60°	1139	976	818
65°	1002	855	725
70°	825	748	616
75°	656	573	601
80°	441	413	386
85°	275	329	384

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1451 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	143.2	4.7
10°-20°	392.9	13.0
20°-30°	543.9	18.0
30°-40°	580.0	19.2
40°-50°	529.1	17.5
50°-60°	414.5	13.7
60°-70°	270.2	8.9
70°-80°	119.7	4.0
80°-90°	25.7	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°	1079.9	35.8
0°-40°	1659.9	55.0
0°-60°	2603.5	86.2
0°-90°	3019.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3019.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1538	1538	1538	1538	1538	
5°	1511	1509	1509	1508	1508	143
15°	1413	1413	1399	1385	1380	397
25°	1225	1218	1198	1156	1124	562
35°	994	987	939	868	846	621
45°	763	747	683	626	601	588
55°	530	514	466	411	389	475
65°	315	297	268	274	228	310
75°	126	117	110	105	116	135
85°	18	20	21	23	25	25
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1537.8	1537.8	1537.8	1537.8	1537.8
2.5°	1527.2	1527.2	1527.2	1525.4	1525.4
5°	1511.2	1509.4	1509.4	1507.6	1507.6
7.5°	1498.7	1496.9	1495.2	1493.4	1489.8
10°	1480.9	1480.9	1479.2	1470.3	1468.5
12.5°	1452.5	1450.7	1443.6	1431.2	1427.6
15°	1413.4	1413.4	1399.2	1384.9	1379.6
17.5°	1370.7	1368.9	1351.2	1336.9	1329.8
20°	1324.5	1320.9	1303.2	1280.1	1267.6
22.5°	1272.9	1272.9	1251.6	1221.4	1208.9
25°	1224.9	1217.8	1198.3	1155.6	1123.6
27.5°	1169.8	1159.2	1137.8	1077.4	1040.0
30°	1109.4	1104.0	1073.8	995.6	967.1
32.5°	1052.5	1043.6	1011.6	929.8	906.7
35°	993.8	986.7	938.7	867.6	846.3
37.5°	935.1	926.3	865.8	808.9	782.3
40°	876.5	865.8	800.0	748.5	720.0
42.5°	821.4	807.1	743.1	688.0	656.0
45°	762.7	746.7	682.7	625.8	600.9
47.5°	704.0	689.8	631.1	572.5	544.0
50°	641.8	629.4	576.0	517.4	487.1
52.5°	590.2	570.7	519.1	460.5	435.6
55°	529.8	513.8	465.8	410.7	389.3
57.5°	474.7	458.7	414.2	362.7	344.9
60°	423.1	400.0	362.7	318.2	304.0
62.5°	366.2	348.5	316.5	279.1	296.9
65°	314.7	296.9	268.5	273.8	227.6
67.5°	257.8	248.9	224.0	199.1	192.0
70°	209.8	199.1	190.2	163.6	156.5
72.5°	167.1	156.5	144.0	129.8	124.4
75°	126.2	117.3	110.2	104.9	115.6
77.5°	87.1	83.6	78.2	72.9	71.1
80°	56.9	55.1	53.3	51.6	49.8
82.5°	33.8	33.8	33.8	33.8	33.8
85°	17.8	19.6	21.3	23.1	24.9
87.5°	10.7	10.7	12.4	14.2	16.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)