

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: P562420

Luminaire Tested: FSR-24-4-LD4-1STD-50-UNV-80-86-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562420
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-80-86-EDD-90
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR PC ENVIRON
SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3379.0 lumens
Efficiency: N/A
Efficacy: 101.5 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

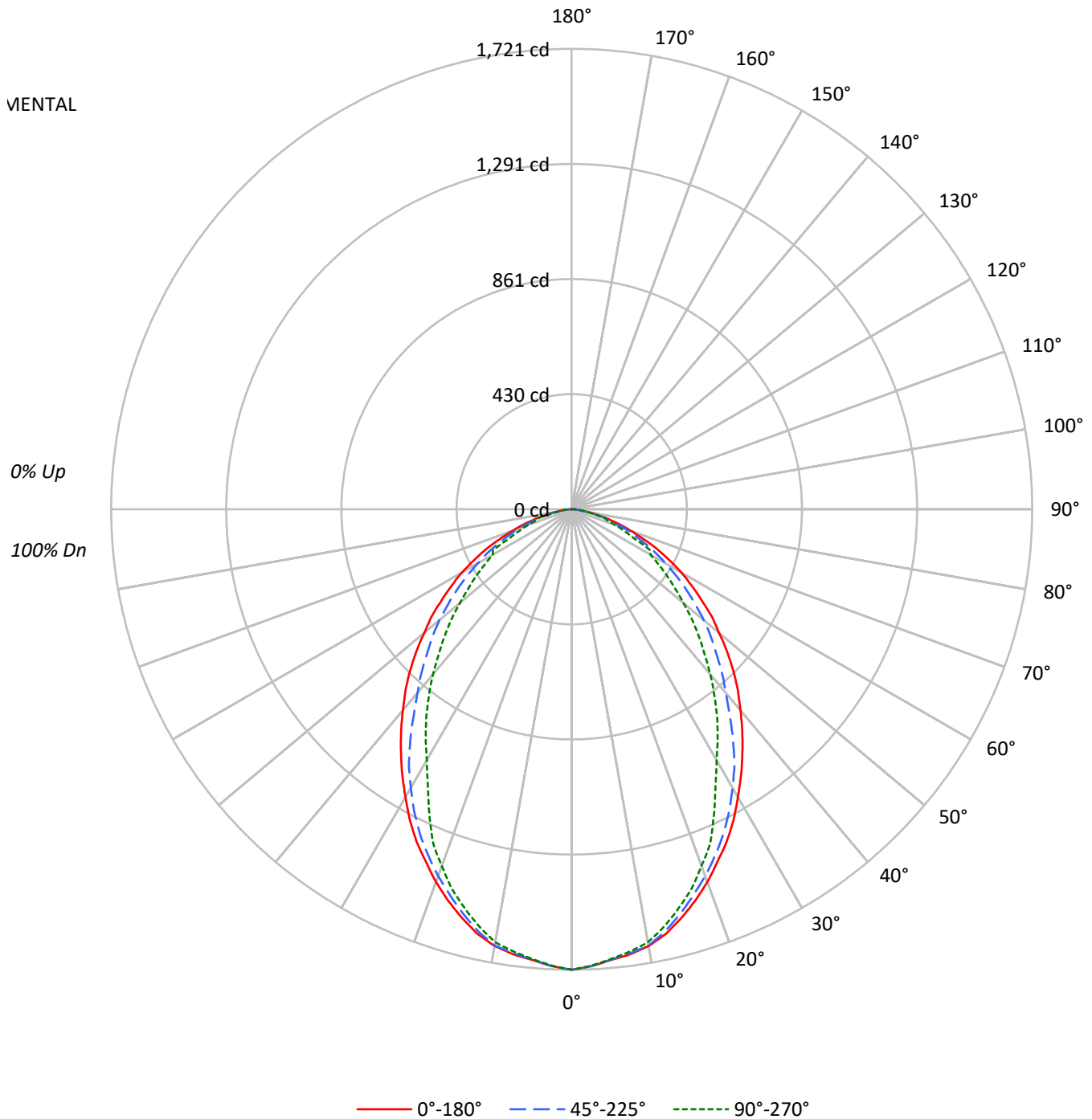
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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																												
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°	2316	2316	2316
5°	2284	2282	2279
10°	2265	2262	2246
15°	2204	2181	2151
20°	2123	2088	2031
25°	2035	1991	1867
30°	1929	1867	1682
35°	1827	1726	1556
40°	1723	1573	1415
45°	1624	1454	1280
50°	1504	1349	1141
55°	1391	1223	1022
60°	1274	1092	916
65°	1121	957	811
70°	924	838	689
75°	735	642	672
80°	494	463	432
85°	307	369	431

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1624 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	160.2	4.7
10°-20°	439.7	13.0
20°-30°	608.8	18.0
30°-40°	649.1	19.2
40°-50°	592.2	17.5
50°-60°	463.9	13.7
60°-70°	302.4	8.9
70°-80°	134.0	4.0
80°-90°	28.8	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°	1208.7	35.8
0°-40°	1857.8	55.0
0°-60°	2913.9	86.2
0°-90°	3379.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3379.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1721	1721	1721	1721	1721	
5°	1691	1689	1689	1687	1687	161
15°	1582	1582	1566	1550	1544	445
25°	1371	1363	1341	1293	1258	629
35°	1112	1104	1051	971	947	695
45°	854	836	764	700	673	658
55°	593	575	521	460	436	532
65°	352	332	300	306	255	347
75°	141	131	123	117	129	151
85°	20	22	24	26	28	28
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1721.2	1721.2	1721.2	1721.2	1721.2
2.5°	1709.3	1709.3	1709.3	1707.3	1707.3
5°	1691.4	1689.4	1689.4	1687.4	1687.4
7.5°	1677.4	1675.5	1673.5	1671.5	1667.5
10°	1657.5	1657.5	1655.6	1645.6	1643.6
12.5°	1625.7	1623.7	1615.8	1601.8	1597.8
15°	1581.9	1581.9	1566.0	1550.1	1544.1
17.5°	1534.2	1532.2	1512.3	1496.4	1488.4
20°	1482.4	1478.5	1458.6	1432.7	1418.8
22.5°	1424.7	1424.7	1400.9	1367.0	1353.1
25°	1371.0	1363.0	1341.2	1293.4	1257.6
27.5°	1309.3	1297.4	1273.5	1205.8	1164.1
30°	1241.7	1235.7	1201.9	1114.3	1082.5
32.5°	1178.0	1168.0	1132.2	1040.7	1014.8
35°	1112.3	1104.4	1050.6	971.0	947.2
37.5°	1046.7	1036.7	969.1	905.4	875.5
40°	981.0	969.1	895.4	837.7	805.9
42.5°	919.3	903.4	831.8	770.1	734.3
45°	853.6	835.7	764.1	700.4	672.6
47.5°	788.0	772.1	706.4	640.7	608.9
50°	718.3	704.4	644.7	579.0	545.2
52.5°	660.6	638.7	581.0	515.4	487.5
55°	593.0	575.1	521.3	459.7	435.8
57.5°	531.3	513.4	463.6	405.9	386.0
60°	473.6	447.7	405.9	356.2	340.3
62.5°	409.9	390.0	354.2	312.4	332.3
65°	352.2	332.3	300.5	306.4	254.7
67.5°	288.5	278.6	250.7	222.9	214.9
70°	234.8	222.9	212.9	183.1	175.1
72.5°	187.0	175.1	161.2	145.3	139.3
75°	141.3	131.3	123.4	117.4	129.3
77.5°	97.5	93.5	87.6	81.6	79.6
80°	63.7	61.7	59.7	57.7	55.7
82.5°	37.8	37.8	37.8	37.8	37.8
85°	19.9	21.9	23.9	25.9	27.9
87.5°	11.9	11.9	13.9	15.9	17.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)