

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: P560888

Luminaire Tested: FSR-12-4-LD4-1HI-50-UNV-80-88-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560888
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-12-4-LD4-1HI-50-UNV-80-88-EDD-90
Description: 1X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .500 CLEAR PC ENVIRON
SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3074.0 lumens
Efficiency: N/A
Efficacy: 71.2 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

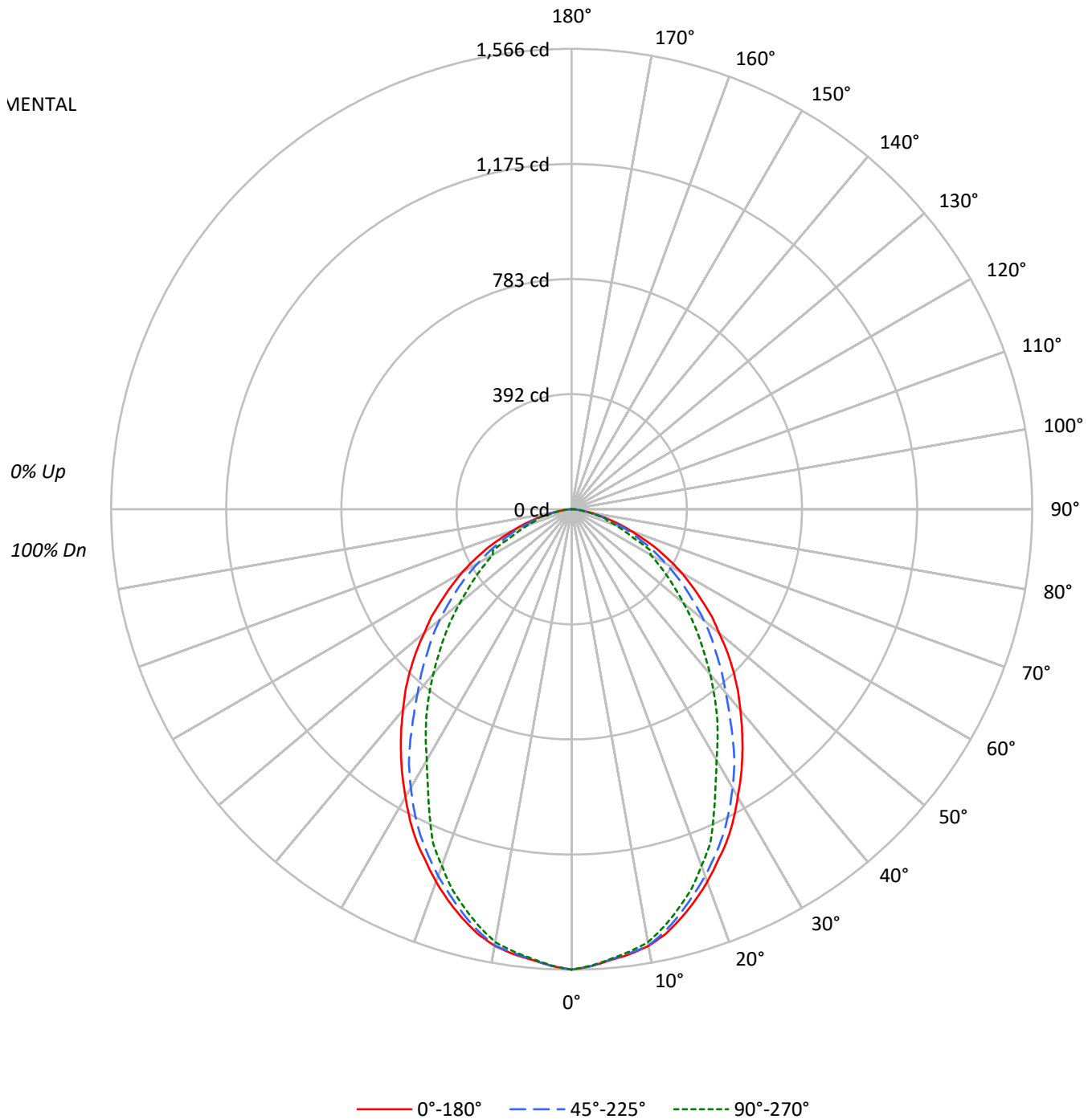
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	4214	4214	4214
5°	4156	4152	4147
10°	4120	4115	4086
15°	4009	3969	3913
20°	3862	3800	3696
25°	3703	3623	3397
30°	3510	3397	3060
35°	3324	3140	2831
40°	3135	2862	2575
45°	2955	2645	2329
50°	2736	2455	2076
55°	2531	2225	1860
60°	2319	1988	1666
65°	2040	1740	1475
70°	1681	1524	1253
75°	1336	1167	1224
80°	897	841	786
85°	559	670	781

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2955 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	145.8	4.7
10°-20°	400.0	13.0
20°-30°	553.8	18.0
30°-40°	590.5	19.2
40°-50°	538.7	17.5
50°-60°	422.1	13.7
60°-70°	275.1	8.9
70°-80°	121.9	4.0
80°-90°	26.2	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°	1099.6	35.8
0°-40°	1690.1	55.0
0°-60°	2650.9	86.2
0°-90°	3074.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3074.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1566	1566	1566	1566	1566	
5°	1539	1537	1537	1535	1535	146
15°	1439	1439	1425	1410	1405	405
25°	1247	1240	1220	1177	1144	573
35°	1012	1005	956	883	862	633
45°	777	760	695	637	612	598
55°	540	523	474	418	396	484
65°	320	302	273	279	232	316
75°	128	120	112	107	118	138
85°	18	20	22	24	25	25
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1565.9	1565.9	1565.9	1565.9	1565.9
2.5°	1555.0	1555.0	1555.0	1553.2	1553.2
5°	1538.7	1536.9	1536.9	1535.1	1535.1
7.5°	1526.0	1524.2	1522.4	1520.6	1517.0
10°	1507.9	1507.9	1506.1	1497.1	1495.3
12.5°	1479.0	1477.2	1469.9	1457.2	1453.6
15°	1439.1	1439.1	1424.7	1410.2	1404.7
17.5°	1395.7	1393.9	1375.8	1361.3	1354.1
20°	1348.6	1345.0	1326.9	1303.4	1290.7
22.5°	1296.1	1296.1	1274.4	1243.6	1231.0
25°	1247.3	1240.0	1220.1	1176.7	1144.1
27.5°	1191.1	1180.3	1158.6	1097.0	1059.0
30°	1129.6	1124.2	1093.4	1013.7	984.8
32.5°	1071.7	1062.6	1030.0	946.8	923.2
35°	1011.9	1004.7	955.8	883.4	861.7
37.5°	952.2	943.1	881.6	823.7	796.5
40°	892.4	881.6	814.6	762.1	733.1
42.5°	836.3	821.8	756.7	700.6	668.0
45°	776.6	760.3	695.1	637.2	611.9
47.5°	716.9	702.4	642.6	582.9	553.9
50°	653.5	640.8	586.5	526.8	496.0
52.5°	601.0	581.1	528.6	468.9	443.5
55°	539.5	523.2	474.3	418.2	396.4
57.5°	483.3	467.0	421.8	369.3	351.2
60°	430.8	407.3	369.3	324.0	309.6
62.5°	372.9	354.8	322.2	284.2	302.3
65°	320.4	302.3	273.3	278.8	231.7
67.5°	262.5	253.4	228.1	202.7	195.5
70°	213.6	202.7	193.7	166.5	159.3
72.5°	170.2	159.3	146.6	132.1	126.7
75°	128.5	119.5	112.2	106.8	117.7
77.5°	88.7	85.1	79.7	74.2	72.4
80°	57.9	56.1	54.3	52.5	50.7
82.5°	34.4	34.4	34.4	34.4	34.4
85°	18.1	19.9	21.7	23.5	25.3
87.5°	10.9	10.9	12.7	14.5	16.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)