

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: P563895

Luminaire Tested: FSR-24-4-LD4-4LO-40-UNV-80-87-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563895
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-LD4-4LO-40-UNV-80-87-EDD
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR PC ENVIRON
SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11039.0 lumens
Efficiency: N/A
Efficacy: 117.9 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

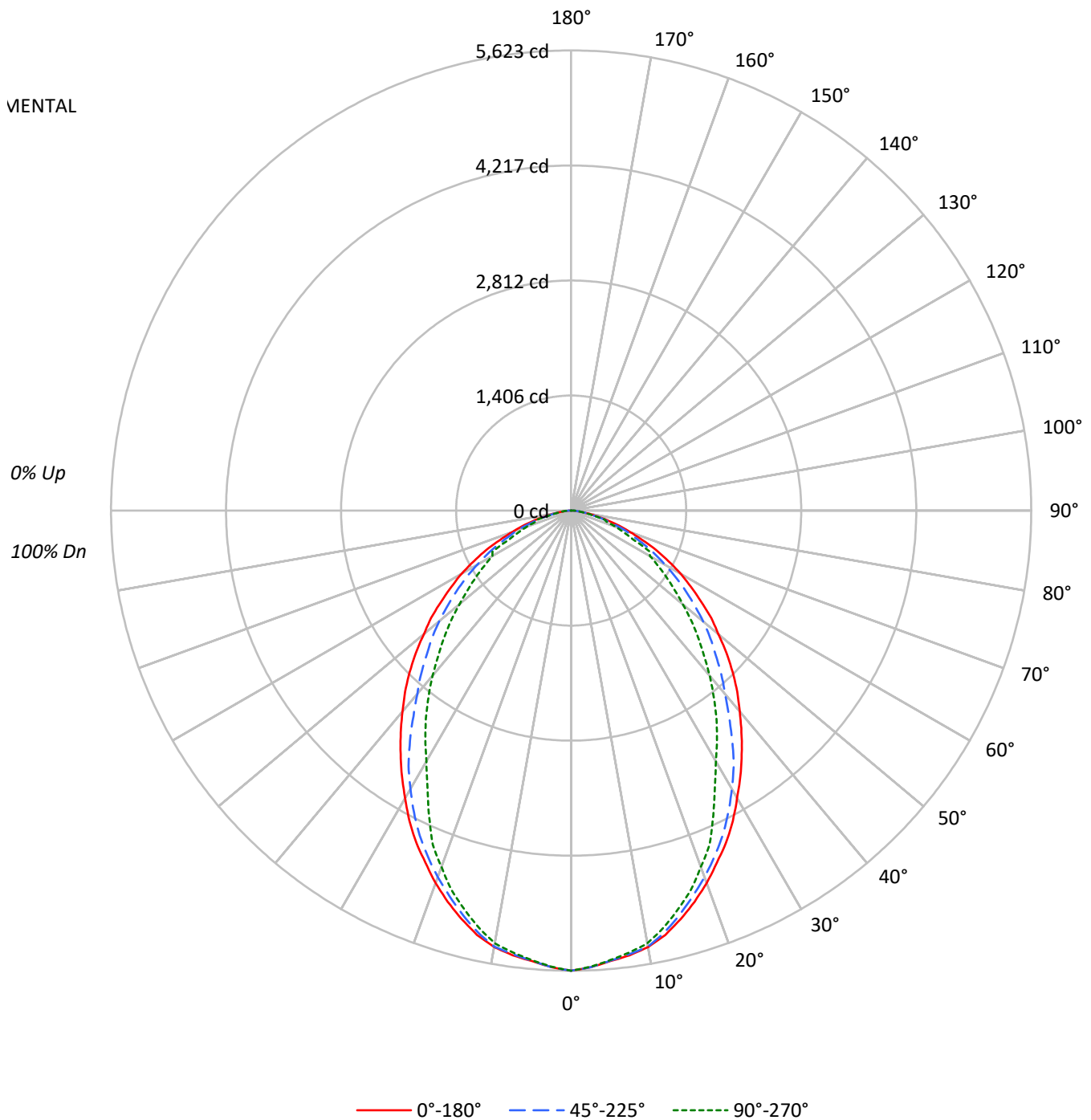
Input Watts (W): 93.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	7566	7566	7566
5°	7463	7454	7445
10°	7398	7389	7336
15°	7199	7126	7027
20°	6934	6823	6637
25°	6649	6505	6099
30°	6302	6100	5494
35°	5969	5638	5083
40°	5629	5138	4624
45°	5307	4750	4181
50°	4912	4409	3728
55°	4544	3995	3340
60°	4163	3569	2991
65°	3663	3125	2649
70°	3018	2736	2251
75°	2400	2095	2196
80°	1612	1511	1410
85°	1003	1204	1405

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5307 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	523.4	4.7
10°-20°	1436.5	13.0
20°-30°	1988.8	18.0
30°-40°	2120.6	19.2
40°-50°	1934.6	17.5
50°-60°	1515.6	13.7
60°-70°	987.8	8.9
70°-80°	437.6	4.0
80°-90°	94.0	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°	3948.7	35.8
0°-40°	6069.4	55.0
0°-60°	9519.6	86.2
0°-90°	11039.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11039.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5623	5623	5623	5623	5623	
5°	5526	5519	5519	5513	5513	525
15°	5168	5168	5116	5064	5045	1453
25°	4479	4453	4382	4226	4108	2056
35°	3634	3608	3432	3172	3094	2272
45°	2789	2730	2496	2288	2197	2148
55°	1937	1879	1703	1502	1424	1738
65°	1151	1086	982	1001	832	1134
75°	462	429	403	384	422	495
85°	65	72	78	84	91	90
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5623.1	5623.1	5623.1	5623.1	5623.1
2.5°	5584.1	5584.1	5584.1	5577.6	5577.6
5°	5525.6	5519.1	5519.1	5512.6	5512.6
7.5°	5480.1	5473.6	5467.1	5460.6	5447.6
10°	5415.1	5415.1	5408.6	5376.1	5369.6
12.5°	5311.1	5304.6	5278.6	5233.1	5220.1
15°	5168.1	5168.1	5116.1	5064.1	5044.6
17.5°	5012.1	5005.6	4940.5	4888.5	4862.5
20°	4843.0	4830.0	4765.0	4680.5	4635.0
22.5°	4654.5	4654.5	4576.5	4466.0	4420.5
25°	4479.0	4453.0	4381.5	4225.5	4108.5
27.5°	4277.5	4238.5	4160.5	3939.4	3802.9
30°	4056.4	4036.9	3926.4	3640.4	3536.4
32.5°	3848.4	3815.9	3698.9	3399.9	3315.4
35°	3633.9	3607.9	3432.4	3172.3	3094.3
37.5°	3419.4	3386.9	3165.8	2957.8	2860.3
40°	3204.9	3165.8	2925.3	2736.8	2632.8
42.5°	3003.3	2951.3	2717.3	2515.8	2398.8
45°	2788.8	2730.3	2496.3	2288.3	2197.2
47.5°	2574.3	2522.3	2307.8	2093.2	1989.2
50°	2346.8	2301.3	2106.2	1891.7	1781.2
52.5°	2158.2	2086.7	1898.2	1683.7	1592.7
55°	1937.2	1878.7	1703.2	1501.7	1423.7
57.5°	1735.7	1677.2	1514.7	1326.1	1261.1
60°	1547.2	1462.7	1326.1	1163.6	1111.6
62.5°	1339.1	1274.1	1157.1	1020.6	1085.6
65°	1150.6	1085.6	981.6	1001.1	832.1
67.5°	942.6	910.1	819.1	728.1	702.1
70°	767.1	728.1	695.6	598.1	572.1
72.5°	611.1	572.1	526.6	474.6	455.1
75°	461.6	429.0	403.0	383.5	422.5
77.5°	318.5	305.5	286.0	266.5	260.0
80°	208.0	201.5	195.0	188.5	182.0
82.5°	123.5	123.5	123.5	123.5	123.5
85°	65.0	71.5	78.0	84.5	91.0
87.5°	39.0	39.0	45.5	52.0	58.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)