

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: P563890

Luminaire Tested: FSR-24-4-LD4-4LO-40-UNV-80-85-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563890
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-80-85-EDD-90
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR PC ENVIRON
SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9695.0 lumens
Efficiency: N/A
Efficacy: 103.6 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

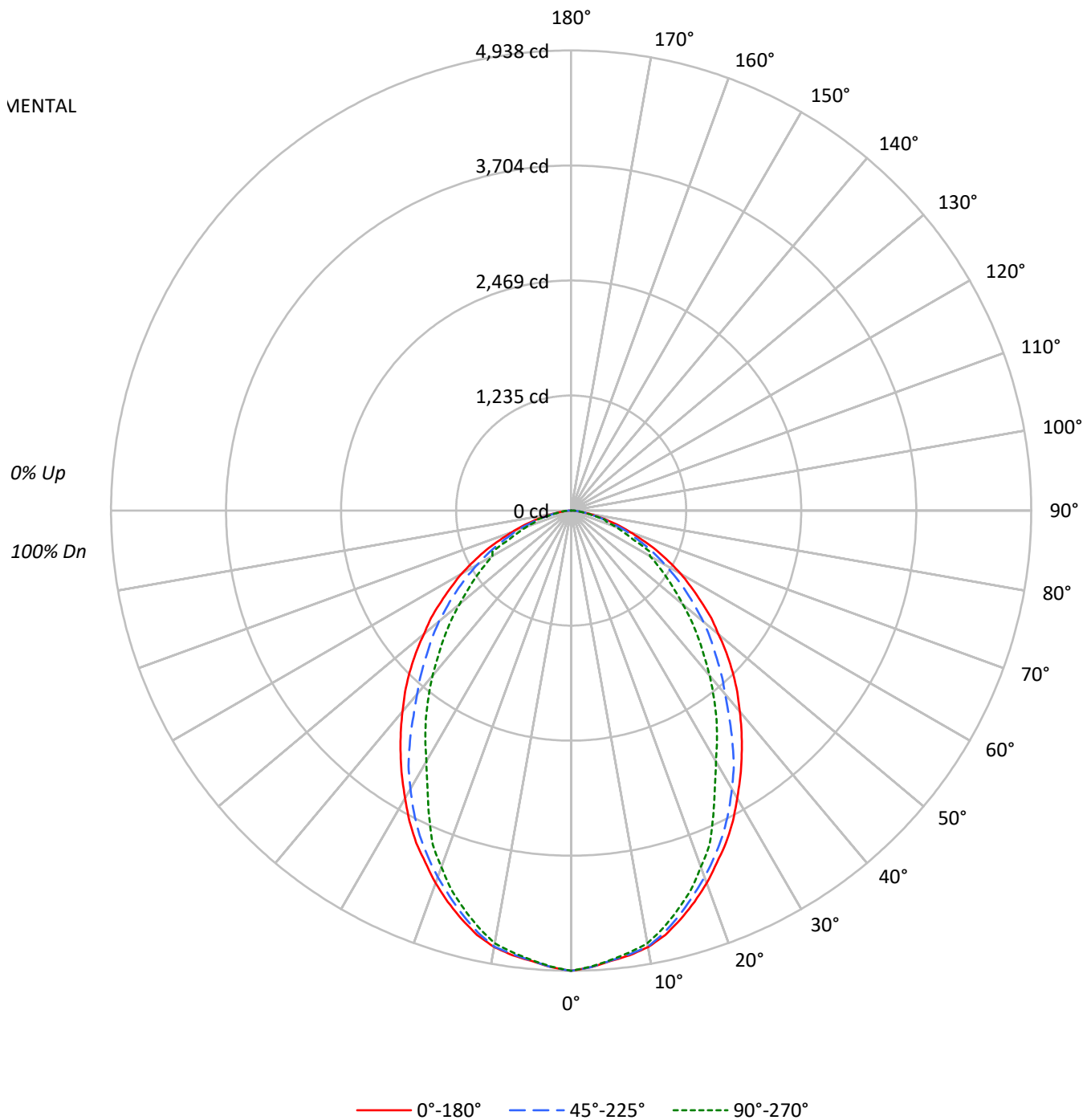
Input Watts (W): 93.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	6645	6645	6645
5°	6554	6547	6539
10°	6498	6490	6443
15°	6322	6259	6171
20°	6090	5992	5829
25°	5840	5713	5357
30°	5535	5358	4825
35°	5242	4951	4464
40°	4944	4513	4061
45°	4661	4172	3672
50°	4314	3872	3274
55°	3991	3509	2933
60°	3657	3134	2627
65°	3217	2745	2327
70°	2650	2403	1976
75°	2108	1840	1929
80°	1416	1327	1239
85°	881	1057	1233

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4661 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	459.7	4.7
10°-20°	1261.6	13.0
20°-30°	1746.6	18.0
30°-40°	1862.4	19.2
40°-50°	1699.1	17.5
50°-60°	1331.1	13.7
60°-70°	867.5	8.9
70°-80°	384.4	4.0
80°-90°	82.5	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°	3468.0	35.8
0°-40°	5330.4	55.0
0°-60°	8360.6	86.2
0°-90°	9695.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9695.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4938	4938	4938	4938	4938	
5°	4853	4847	4847	4841	4841	461
15°	4539	4539	4493	4448	4430	1276
25°	3934	3911	3848	3711	3608	1806
35°	3192	3169	3014	2786	2718	1995
45°	2449	2398	2192	2010	1930	1887
55°	1701	1650	1496	1319	1250	1526
65°	1010	953	862	879	731	996
75°	405	377	354	337	371	434
85°	57	63	68	74	80	79
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4938.5	4938.5	4938.5	4938.5	4938.5
2.5°	4904.2	4904.2	4904.2	4898.5	4898.5
5°	4852.9	4847.2	4847.2	4841.4	4841.4
7.5°	4812.9	4807.2	4801.5	4795.8	4784.4
10°	4755.8	4755.8	4750.1	4721.6	4715.8
12.5°	4664.5	4658.8	4635.9	4595.9	4584.5
15°	4538.9	4538.9	4493.2	4447.5	4430.4
17.5°	4401.8	4396.1	4339.0	4293.4	4270.5
20°	4253.4	4242.0	4184.9	4110.7	4070.7
22.5°	4087.8	4087.8	4019.3	3922.3	3882.3
25°	3933.7	3910.8	3848.0	3711.0	3608.2
27.5°	3756.7	3722.4	3653.9	3459.8	3339.9
30°	3562.6	3545.4	3448.4	3197.2	3105.8
32.5°	3379.9	3351.3	3248.6	2985.9	2911.7
35°	3191.5	3168.6	3014.5	2786.1	2717.6
37.5°	3003.1	2974.5	2780.4	2597.7	2512.1
40°	2814.7	2780.4	2569.2	2403.6	2312.2
42.5°	2637.7	2592.0	2386.5	2209.5	2106.7
45°	2449.3	2397.9	2192.4	2009.7	1929.7
47.5°	2260.9	2215.2	2026.8	1838.4	1747.0
50°	2061.0	2021.1	1849.8	1661.4	1564.3
52.5°	1895.5	1832.7	1667.1	1478.7	1398.8
55°	1701.4	1650.0	1495.8	1318.8	1250.3
57.5°	1524.4	1473.0	1330.3	1164.7	1107.6
60°	1358.8	1284.6	1164.7	1022.0	976.3
62.5°	1176.1	1119.0	1016.2	896.4	953.4
65°	1010.5	953.4	862.1	879.2	730.8
67.5°	827.8	799.3	719.4	639.4	616.6
70°	673.7	639.4	610.9	525.3	502.4
72.5°	536.7	502.4	462.4	416.8	399.6
75°	405.4	376.8	354.0	336.8	371.1
77.5°	279.8	268.3	251.2	234.1	228.4
80°	182.7	177.0	171.3	165.6	159.9
82.5°	108.5	108.5	108.5	108.5	108.5
85°	57.1	62.8	68.5	74.2	79.9
87.5°	34.3	34.3	40.0	45.7	51.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)