

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: P563004

Luminaire Tested: FSR-24-4-LD4-2STD-50-UNV-80-96-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563004
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-LD4-2STD-50-UNV-80-96-EDD-90
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6913.0 lumens
Efficiency: N/A
Efficacy: 103.8 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

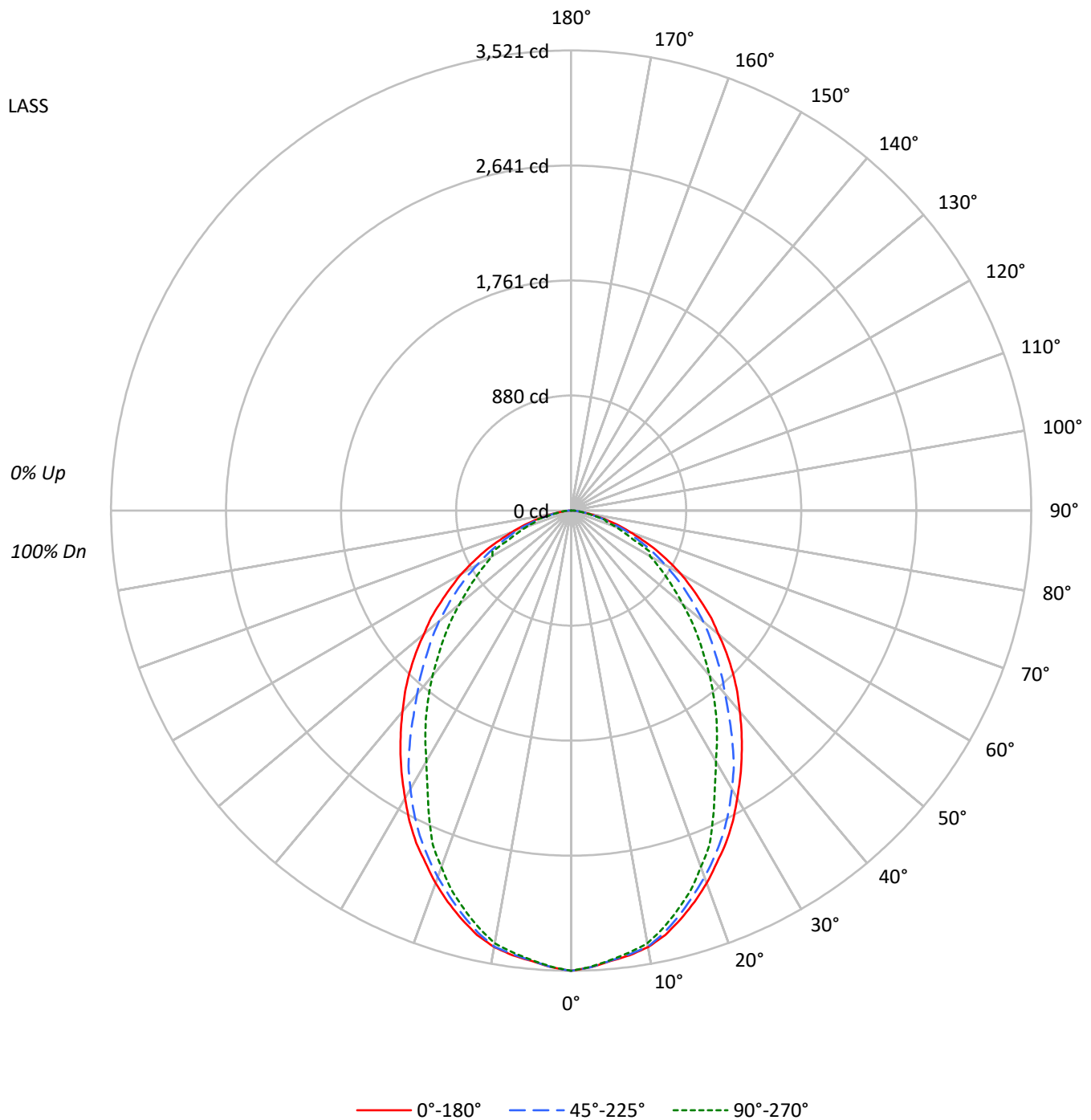
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	4738	4738	4738
5°	4674	4668	4663
10°	4633	4627	4594
15°	4508	4463	4400
20°	4343	4273	4156
25°	4164	4073	3820
30°	3947	3820	3441
35°	3738	3531	3183
40°	3525	3218	2896
45°	3323	2975	2618
50°	3076	2761	2335
55°	2846	2502	2091
60°	2607	2235	1873
65°	2294	1957	1659
70°	1890	1714	1409
75°	1502	1312	1376
80°	1010	946	883
85°	628	755	880

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3323 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	327.8	4.7
10°-20°	899.6	13.0
20°-30°	1245.4	18.0
30°-40°	1328.0	19.2
40°-50°	1211.5	17.5
50°-60°	949.1	13.7
60°-70°	618.6	8.9
70°-80°	274.1	4.0
80°-90°	58.8	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°	2472.8	35.8
0°-40°	3800.8	55.0
0°-60°	5961.5	86.2
0°-90°	6913.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6913.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3521	3521	3521	3521	3521	
5°	3460	3456	3456	3452	3452	328
15°	3236	3236	3204	3171	3159	910
25°	2805	2789	2744	2646	2573	1288
35°	2276	2259	2150	1987	1938	1423
45°	1746	1710	1563	1433	1376	1345
55°	1213	1176	1067	940	892	1088
65°	721	680	615	627	521	710
75°	289	269	252	240	265	310
85°	41	45	49	53	57	56
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3521.4	3521.4	3521.4	3521.4	3521.4
2.5°	3497.0	3497.0	3497.0	3492.9	3492.9
5°	3460.3	3456.3	3456.3	3452.2	3452.2
7.5°	3431.8	3427.8	3423.7	3419.6	3411.5
10°	3391.1	3391.1	3387.0	3366.7	3362.6
12.5°	3326.0	3321.9	3305.6	3277.1	3269.0
15°	3236.4	3236.4	3203.9	3171.3	3159.1
17.5°	3138.7	3134.6	3093.9	3061.4	3045.1
20°	3032.9	3024.7	2984.0	2931.1	2902.6
22.5°	2914.8	2914.8	2866.0	2796.8	2768.3
25°	2804.9	2788.6	2743.8	2646.1	2572.9
27.5°	2678.7	2654.3	2605.4	2467.0	2381.5
30°	2540.3	2528.1	2458.9	2279.7	2214.6
32.5°	2410.0	2389.7	2316.4	2129.1	2076.2
35°	2275.7	2259.4	2149.5	1986.6	1937.8
37.5°	2141.3	2121.0	1982.6	1852.3	1791.2
40°	2007.0	1982.6	1831.9	1713.9	1648.7
42.5°	1880.8	1848.2	1701.7	1575.5	1502.2
45°	1746.4	1709.8	1563.3	1433.0	1376.0
47.5°	1612.1	1579.5	1445.2	1310.9	1245.7
50°	1469.6	1441.1	1319.0	1184.7	1115.4
52.5°	1351.6	1306.8	1188.7	1054.4	997.4
55°	1213.1	1176.5	1066.6	940.4	891.5
57.5°	1086.9	1050.3	948.5	830.5	789.8
60°	968.9	916.0	830.5	728.7	696.1
62.5°	838.6	797.9	724.6	639.1	679.9
65°	720.6	679.9	614.7	626.9	521.1
67.5°	590.3	569.9	512.9	455.9	439.7
70°	480.4	455.9	435.6	374.5	358.2
72.5°	382.7	358.2	329.7	297.2	285.0
75°	289.0	268.7	252.4	240.2	264.6
77.5°	199.5	191.3	179.1	166.9	162.8
80°	130.3	126.2	122.1	118.1	114.0
82.5°	77.3	77.3	77.3	77.3	77.3
85°	40.7	44.8	48.9	52.9	57.0
87.5°	24.4	24.4	28.5	32.6	36.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)