

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: P562994

Luminaire Tested: FSR-24-4-LD4-2STD-50-UNV-80-85-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562994
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-80-85-EDD-90
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6836.0 lumens
Efficiency: N/A
Efficacy: 102.6 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

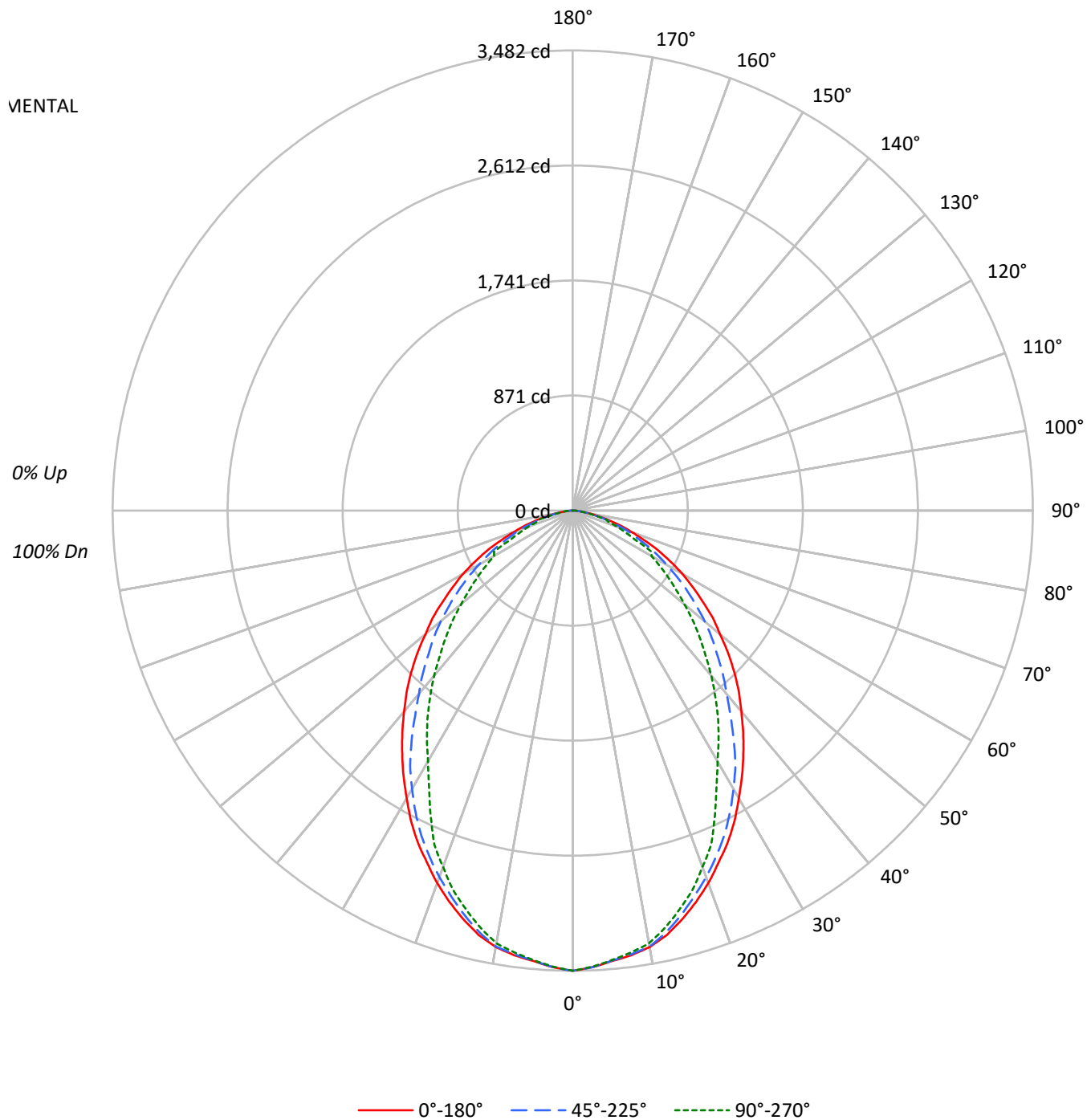
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
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°	4685	4685	4685
5°	4622	4616	4611
10°	4581	4576	4543
15°	4458	4413	4351
20°	4294	4225	4110
25°	4118	4028	3777
30°	3903	3778	3402
35°	3696	3491	3147
40°	3486	3182	2864
45°	3286	2941	2589
50°	3042	2730	2309
55°	2814	2474	2068
60°	2578	2210	1852
65°	2268	1935	1641
70°	1869	1694	1394
75°	1486	1298	1360
80°	998	936	873
85°	622	746	871

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 3286 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	324.1	4.7
10°-20°	889.6	13.0
20°-30°	1231.6	18.0
30°-40°	1313.2	19.2
40°-50°	1198.0	17.5
50°-60°	938.6	13.7
60°-70°	611.7	8.9
70°-80°	271.0	4.0
80°-90°	58.2	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°	2445.3	35.8
0°-40°	3758.5	55.0
0°-60°	5895.1	86.2
0°-90°	6836.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6836.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3482	3482	3482	3482	3482	
5°	3422	3418	3418	3414	3414	325
15°	3200	3200	3168	3136	3124	900
25°	2774	2758	2713	2617	2544	1273
35°	2250	2234	2126	1964	1916	1407
45°	1727	1691	1546	1417	1361	1330
55°	1200	1163	1055	930	882	1076
65°	712	672	608	620	515	702
75°	286	266	250	238	262	306
85°	40	44	48	52	56	56
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3482.2	3482.2	3482.2	3482.2	3482.2
2.5°	3458.0	3458.0	3458.0	3454.0	3454.0
5°	3421.8	3417.8	3417.8	3413.7	3413.7
7.5°	3393.6	3389.6	3385.6	3381.5	3373.5
10°	3353.3	3353.3	3349.3	3329.2	3325.2
12.5°	3288.9	3284.9	3268.8	3240.6	3232.6
15°	3200.4	3200.4	3168.2	3136.0	3123.9
17.5°	3103.8	3099.7	3059.5	3027.3	3011.2
20°	2999.1	2991.0	2950.8	2898.5	2870.3
22.5°	2882.3	2882.3	2834.0	2765.6	2737.4
25°	2773.7	2757.6	2713.3	2616.7	2544.2
27.5°	2648.9	2624.7	2576.4	2439.5	2355.0
30°	2512.0	2499.9	2431.5	2254.4	2189.9
32.5°	2383.2	2363.0	2290.6	2105.4	2053.1
35°	2250.3	2234.2	2125.5	1964.5	1916.2
37.5°	2117.5	2097.4	1960.5	1831.7	1771.3
40°	1984.6	1960.5	1811.5	1694.8	1630.4
42.5°	1859.8	1827.6	1682.7	1557.9	1485.5
45°	1727.0	1690.8	1545.8	1417.0	1360.7
47.5°	1594.1	1561.9	1429.1	1296.3	1231.8
50°	1453.3	1425.1	1304.3	1171.5	1103.0
52.5°	1336.5	1292.2	1175.5	1042.6	986.3
55°	1199.6	1163.4	1054.7	929.9	881.6
57.5°	1074.8	1038.6	938.0	821.2	781.0
60°	958.1	905.8	821.2	720.6	688.4
62.5°	829.3	789.0	716.6	632.0	672.3
65°	712.5	672.3	607.9	619.9	515.3
67.5°	583.7	563.6	507.2	450.9	434.8
70°	475.0	450.9	430.7	370.4	354.3
72.5°	378.4	354.3	326.1	293.9	281.8
75°	285.8	265.7	249.6	237.5	261.7
77.5°	197.3	189.2	177.1	165.1	161.0
80°	128.8	124.8	120.8	116.7	112.7
82.5°	76.5	76.5	76.5	76.5	76.5
85°	40.3	44.3	48.3	52.3	56.4
87.5°	24.2	24.2	28.2	32.2	36.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)