

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: P563226

Luminaire Tested: FSR-24-4-LD4-3HI-50-UNV-82-94-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563226
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-LD4-3HI-50-UNV-82-94-EDD-90
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11961.0 lumens
Efficiency: N/A
Efficacy: 92.3 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

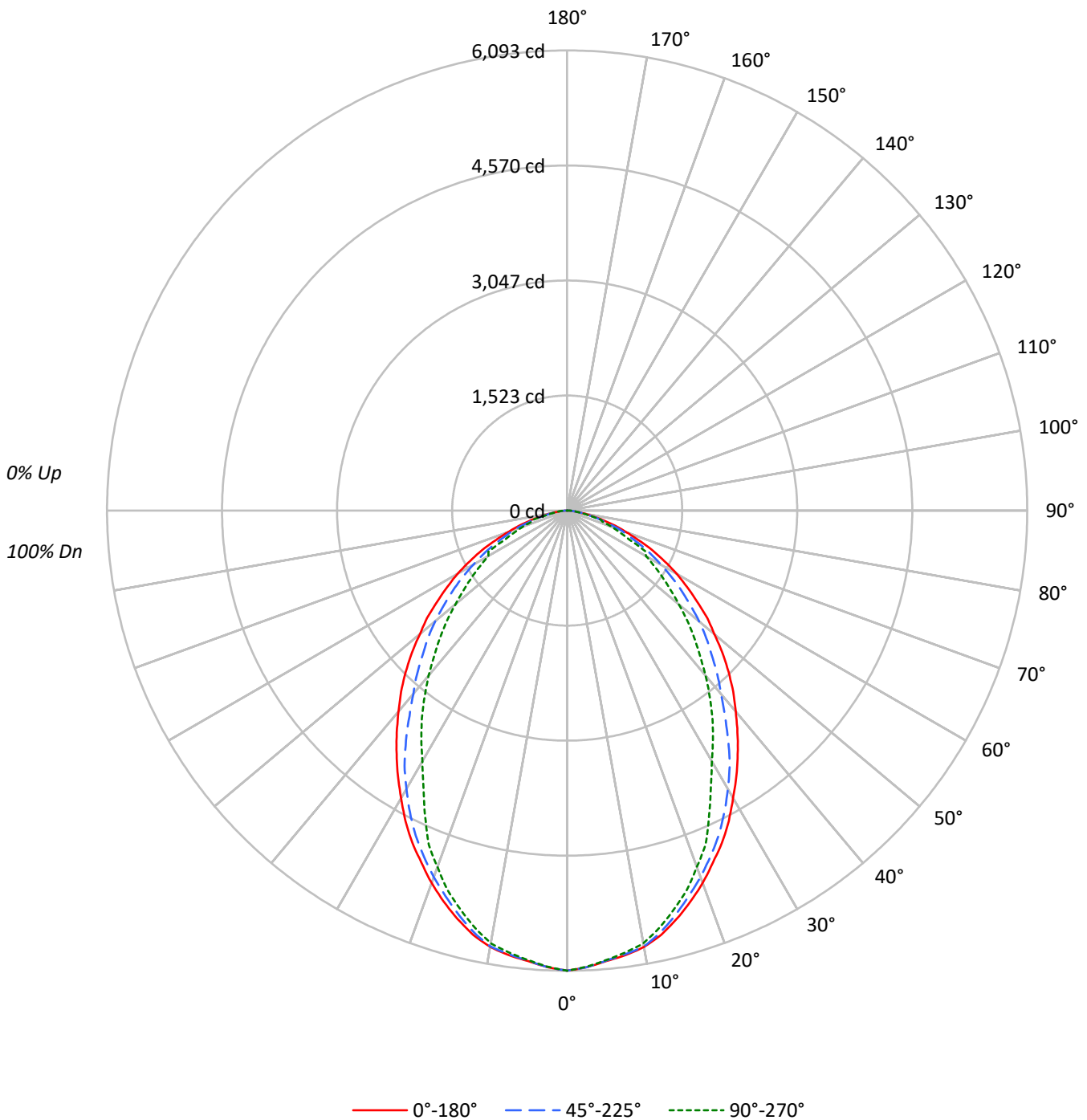
Input Watts (W): 129.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	8198	8198	8198
5°	8086	8077	8067
10°	8016	8007	7949
15°	7800	7722	7614
20°	7514	7393	7191
25°	7205	7048	6609
30°	6829	6610	5953
35°	6467	6109	5507
40°	6099	5567	5011
45°	5750	5147	4530
50°	5323	4777	4040
55°	4924	4329	3619
60°	4511	3867	3241
65°	3969	3386	2870
70°	3270	2965	2438
75°	2600	2270	2380
80°	1746	1637	1528
85°	1087	1304	1522

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5750 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	567.2	4.7
10°-20°	1556.5	13.0
20°-30°	2154.9	18.0
30°-40°	2297.7	19.2
40°-50°	2096.2	17.5
50°-60°	1642.2	13.7
60°-70°	1070.3	8.9
70°-80°	474.2	4.0
80°-90°	101.8	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°	4278.5	35.8
0°-40°	6576.3	55.0
0°-60°	10314.7	86.2
0°-90°	11961.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11961.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6093	6093	6093	6093	6093	
5°	5987	5980	5980	5973	5973	568
15°	5600	5600	5543	5487	5466	1574
25°	4853	4825	4747	4578	4452	2228
35°	3937	3909	3719	3437	3353	2462
45°	3022	2958	2705	2479	2381	2328
55°	2099	2036	1845	1627	1543	1883
65°	1247	1176	1064	1085	902	1229
75°	500	465	437	416	458	536
85°	70	78	84	92	99	98
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6092.8	6092.8	6092.8	6092.8	6092.8
2.5°	6050.5	6050.5	6050.5	6043.5	6043.5
5°	5987.1	5980.1	5980.1	5973.0	5973.0
7.5°	5937.8	5930.8	5923.7	5916.7	5902.6
10°	5867.4	5867.4	5860.3	5825.1	5818.1
12.5°	5754.7	5747.6	5719.5	5670.2	5656.1
15°	5599.7	5599.7	5543.4	5487.0	5465.9
17.5°	5430.7	5423.6	5353.2	5296.8	5268.7
20°	5247.5	5233.4	5163.0	5071.4	5022.1
22.5°	5043.3	5043.3	4958.7	4839.0	4789.7
25°	4853.1	4824.9	4747.4	4578.4	4451.6
27.5°	4634.7	4592.5	4507.9	4268.5	4120.5
30°	4395.2	4374.1	4254.4	3944.5	3831.8
32.5°	4169.9	4134.6	4007.8	3683.8	3592.3
35°	3937.4	3909.2	3719.1	3437.3	3352.8
37.5°	3705.0	3669.8	3430.3	3204.9	3099.2
40°	3472.5	3430.3	3169.7	2965.4	2852.7
42.5°	3254.2	3197.8	2944.3	2725.9	2599.1
45°	3021.7	2958.3	2704.8	2479.4	2380.8
47.5°	2789.3	2732.9	2500.5	2268.1	2155.4
50°	2542.8	2493.5	2282.1	2049.7	1930.0
52.5°	2338.5	2261.0	2056.8	1824.3	1725.7
55°	2099.0	2035.6	1845.4	1627.1	1542.6
57.5°	1880.7	1817.3	1641.2	1436.9	1366.5
60°	1676.4	1584.8	1436.9	1260.8	1204.5
62.5°	1451.0	1380.6	1253.8	1105.9	1176.3
65°	1246.7	1176.3	1063.6	1084.7	901.6
67.5°	1021.3	986.1	887.5	788.9	760.7
70°	831.2	788.9	753.7	648.0	619.8
72.5°	662.1	619.8	570.5	514.2	493.1
75°	500.1	464.9	436.7	415.6	457.8
77.5°	345.1	331.1	309.9	288.8	281.7
80°	225.4	218.4	211.3	204.3	197.2
82.5°	133.8	133.8	133.8	133.8	133.8
85°	70.4	77.5	84.5	91.6	98.6
87.5°	42.3	42.3	49.3	56.3	63.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)