

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: P563615

Luminaire Tested: FSR-24-4-LD4-3STD-50-UNV-82-97-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563615
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-LD4-3STD-50-UNV-82-97-EDD
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10917.0 lumens
Efficiency: N/A
Efficacy: 109.3 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

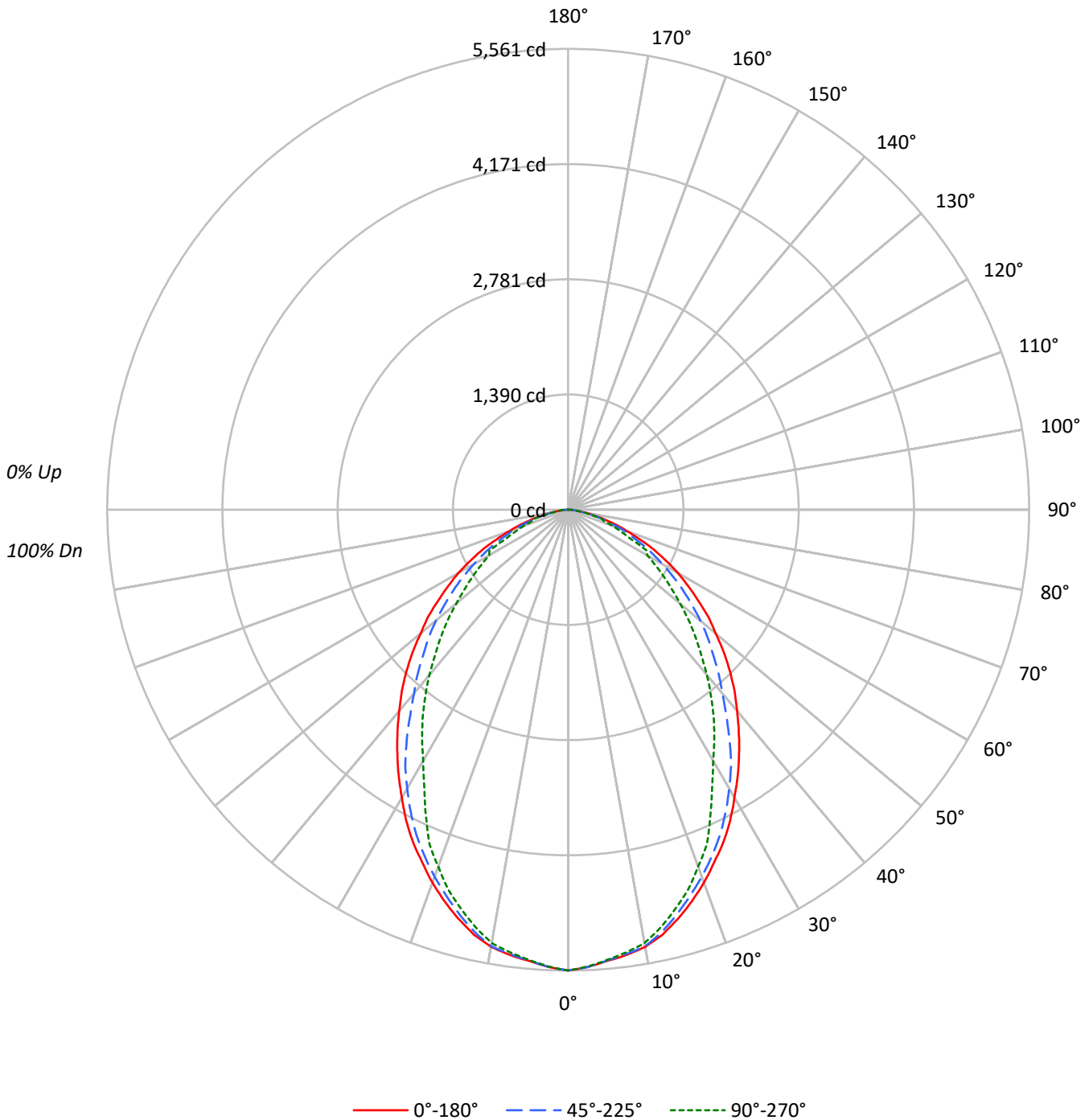
Input Watts (W): 99.9
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	7482	7482	7482
5°	7381	7372	7363
10°	7317	7308	7255
15°	7119	7048	6949
20°	6858	6747	6563
25°	6576	6433	6032
30°	6233	6033	5434
35°	5903	5575	5026
40°	5567	5081	4573
45°	5248	4697	4135
50°	4858	4360	3687
55°	4494	3951	3303
60°	4117	3529	2958
65°	3623	3091	2620
70°	2984	2706	2225
75°	2373	2072	2172
80°	1594	1495	1395
85°	993	1190	1389

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5248 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	517.7	4.7
10°-20°	1420.7	13.0
20°-30°	1966.8	18.0
30°-40°	2097.2	19.2
40°-50°	1913.2	17.5
50°-60°	1498.9	13.7
60°-70°	976.9	8.9
70°-80°	432.8	4.0
80°-90°	92.9	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°	3905.1	35.8
0°-40°	6002.3	55.0
0°-60°	9414.4	86.2
0°-90°	10917.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10917.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5561	5561	5561	5561	5561	
5°	5464	5458	5458	5452	5452	519
15°	5111	5111	5060	5008	4989	1437
25°	4430	4404	4333	4179	4063	2034
35°	3594	3568	3394	3137	3060	2247
45°	2758	2700	2469	2263	2173	2124
55°	1916	1858	1684	1485	1408	1718
65°	1138	1074	971	990	823	1121
75°	456	424	399	379	418	489
85°	64	71	77	84	90	89
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5561.0	5561.0	5561.0	5561.0	5561.0
2.5°	5522.4	5522.4	5522.4	5516.0	5516.0
5°	5464.5	5458.1	5458.1	5451.7	5451.7
7.5°	5419.5	5413.1	5406.7	5400.3	5387.4
10°	5355.3	5355.3	5348.8	5316.7	5310.2
12.5°	5252.4	5246.0	5220.2	5175.2	5162.4
15°	5111.0	5111.0	5059.5	5008.1	4988.8
17.5°	4956.7	4950.2	4885.9	4834.5	4808.8
20°	4789.5	4776.7	4712.4	4628.8	4583.8
22.5°	4603.1	4603.1	4525.9	4416.6	4371.6
25°	4429.5	4403.8	4333.1	4178.8	4063.0
27.5°	4230.2	4191.6	4114.5	3895.9	3760.9
30°	4011.6	3992.3	3883.0	3600.2	3497.3
32.5°	3805.9	3773.7	3658.0	3362.3	3278.7
35°	3593.7	3568.0	3394.4	3137.3	3060.1
37.5°	3381.6	3349.4	3130.9	2925.1	2828.7
40°	3169.4	3130.9	2893.0	2706.6	2603.7
42.5°	2970.1	2918.7	2687.3	2488.0	2372.3
45°	2758.0	2700.1	2468.7	2263.0	2173.0
47.5°	2545.8	2494.4	2282.2	2070.1	1967.2
50°	2320.8	2275.8	2083.0	1870.8	1761.5
52.5°	2134.4	2063.7	1877.2	1665.1	1575.1
55°	1915.8	1857.9	1684.4	1485.1	1407.9
57.5°	1716.5	1658.6	1497.9	1311.5	1247.2
60°	1530.1	1446.5	1311.5	1150.8	1099.3
62.5°	1324.3	1260.1	1144.3	1009.3	1073.6
65°	1137.9	1073.6	970.8	990.0	822.9
67.5°	932.2	900.0	810.0	720.0	694.3
70°	758.6	720.0	687.9	591.5	565.7
72.5°	604.3	565.7	520.7	469.3	450.0
75°	456.4	424.3	398.6	379.3	417.9
77.5°	315.0	302.2	282.9	263.6	257.2
80°	205.7	199.3	192.9	186.4	180.0
82.5°	122.1	122.1	122.1	122.1	122.1
85°	64.3	70.7	77.1	83.6	90.0
87.5°	38.6	38.6	45.0	51.4	57.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)