

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: P564005

Luminaire Tested: FSR-24-4-LD4-4LO-50-UNV-93-86-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P564005
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-50-UNV-93-86-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11625.0 lumens
Efficiency: N/A
Efficacy: 124.2 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

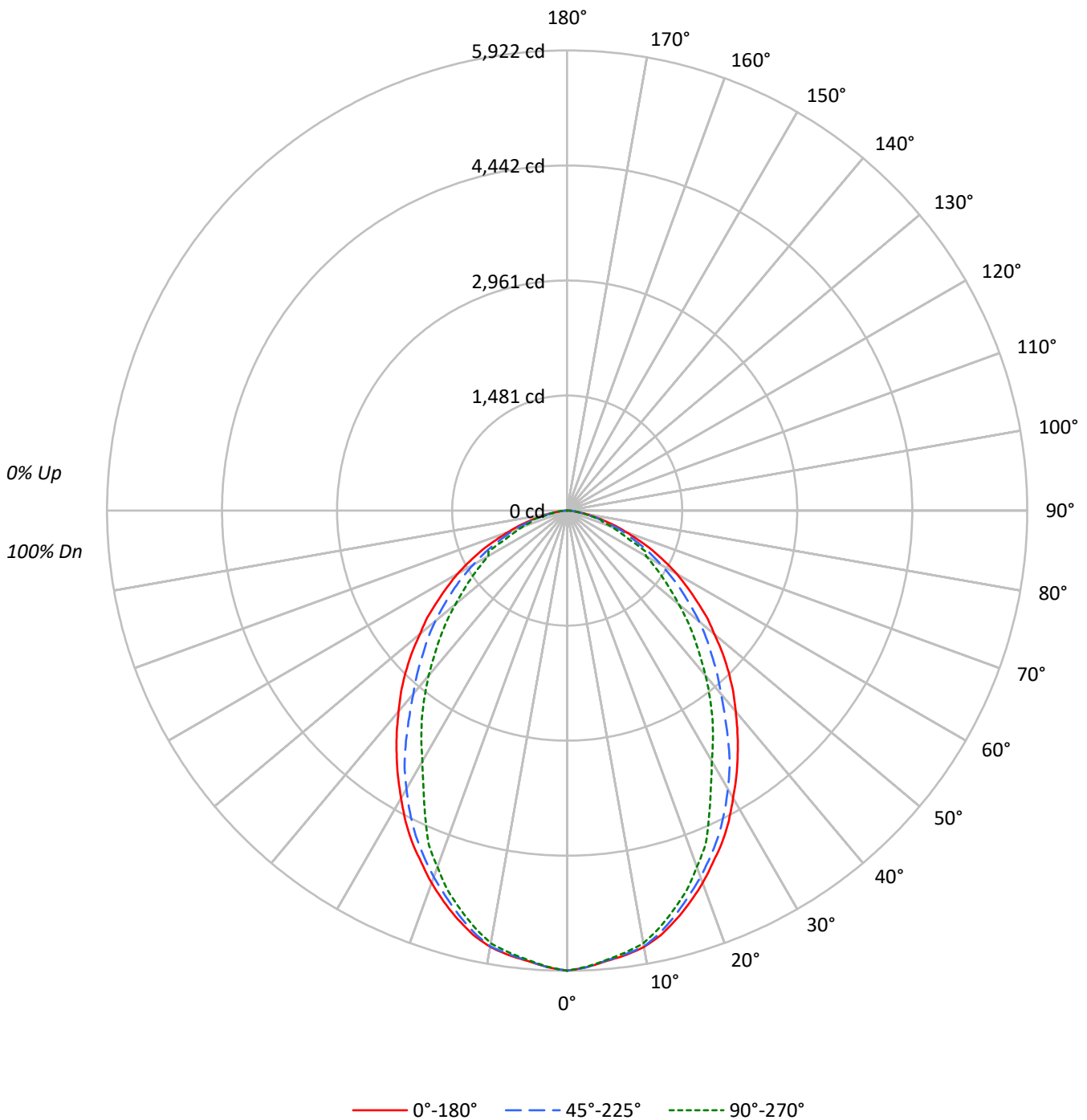
Input Watts (W): 93.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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				
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°	7967	7967	7967
5°	7859	7850	7841
10°	7791	7782	7726
15°	7581	7505	7400
20°	7303	7185	6989
25°	7002	6850	6423
30°	6637	6424	5786
35°	6286	5937	5352
40°	5928	5411	4870
45°	5588	5002	4403
50°	5173	4643	3926
55°	4785	4207	3517
60°	4384	3758	3150
65°	3858	3291	2790
70°	3178	2882	2370
75°	2527	2206	2313
80°	1698	1592	1485
85°	1057	1267	1479

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5588 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	551.2	4.7
10°-20°	1512.8	13.0
20°-30°	2094.4	18.0
30°-40°	2233.2	19.2
40°-50°	2037.3	17.5
50°-60°	1596.1	13.7
60°-70°	1040.2	8.9
70°-80°	460.9	4.0
80°-90°	99.0	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°	4158.4	35.8
0°-40°	6391.6	55.0
0°-60°	10024.9	86.2
0°-90°	11625.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11625.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5922	5922	5922	5922	5922	
5°	5819	5812	5812	5805	5805	552
15°	5442	5442	5388	5333	5312	1530
25°	4717	4689	4614	4450	4326	2165
35°	3827	3799	3615	3341	3259	2392
45°	2937	2875	2629	2410	2314	2262
55°	2040	1978	1794	1581	1499	1830
65°	1212	1143	1034	1054	876	1194
75°	486	452	424	404	445	521
85°	68	75	82	89	96	95
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5921.6	5921.6	5921.6	5921.6	5921.6
2.5°	5880.5	5880.5	5880.5	5873.7	5873.7
5°	5818.9	5812.1	5812.1	5805.2	5805.2
7.5°	5771.0	5764.2	5757.3	5750.5	5736.8
10°	5702.6	5702.6	5695.7	5661.5	5654.6
12.5°	5593.0	5586.2	5558.8	5510.9	5497.2
15°	5442.4	5442.4	5387.6	5332.9	5312.3
17.5°	5278.1	5271.3	5202.8	5148.0	5120.7
20°	5100.1	5086.4	5018.0	4929.0	4881.1
22.5°	4901.6	4901.6	4819.4	4703.1	4655.1
25°	4716.8	4689.4	4614.1	4449.8	4326.5
27.5°	4504.5	4463.5	4381.3	4148.6	4004.8
30°	4271.8	4251.2	4134.9	3833.6	3724.1
32.5°	4052.7	4018.5	3895.3	3580.4	3491.4
35°	3826.8	3799.4	3614.6	3340.8	3258.6
37.5°	3600.9	3566.7	3333.9	3114.8	3012.2
40°	3375.0	3333.9	3080.6	2882.1	2772.6
42.5°	3162.8	3108.0	2861.5	2649.3	2526.1
45°	2936.8	2875.2	2628.8	2409.7	2313.9
47.5°	2710.9	2656.2	2430.3	2204.3	2094.8
50°	2471.3	2423.4	2218.0	1992.1	1875.8
52.5°	2272.8	2197.5	1999.0	1773.1	1677.2
55°	2040.0	1978.4	1793.6	1581.4	1499.2
57.5°	1827.8	1766.2	1595.1	1396.5	1328.1
60°	1629.3	1540.3	1396.5	1225.4	1170.6
62.5°	1410.2	1341.8	1218.6	1074.8	1143.2
65°	1211.7	1143.2	1033.7	1054.3	876.3
67.5°	992.6	958.4	862.6	766.7	739.3
70°	807.8	766.7	732.5	629.8	602.4
72.5°	643.5	602.4	554.5	499.7	479.2
75°	486.1	451.8	424.4	403.9	445.0
77.5°	335.4	321.8	301.2	280.7	273.8
80°	219.1	212.2	205.4	198.5	191.7
82.5°	130.1	130.1	130.1	130.1	130.1
85°	68.5	75.3	82.1	89.0	95.8
87.5°	41.1	41.1	47.9	54.8	61.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)