

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: P563883

Luminaire Tested: FSR-24-4-LD4-4LO-35-UNV-93-94-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563883
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-35-UNV-93-94-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11706.0 lumens
Efficiency: N/A
Efficacy: 125.1 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

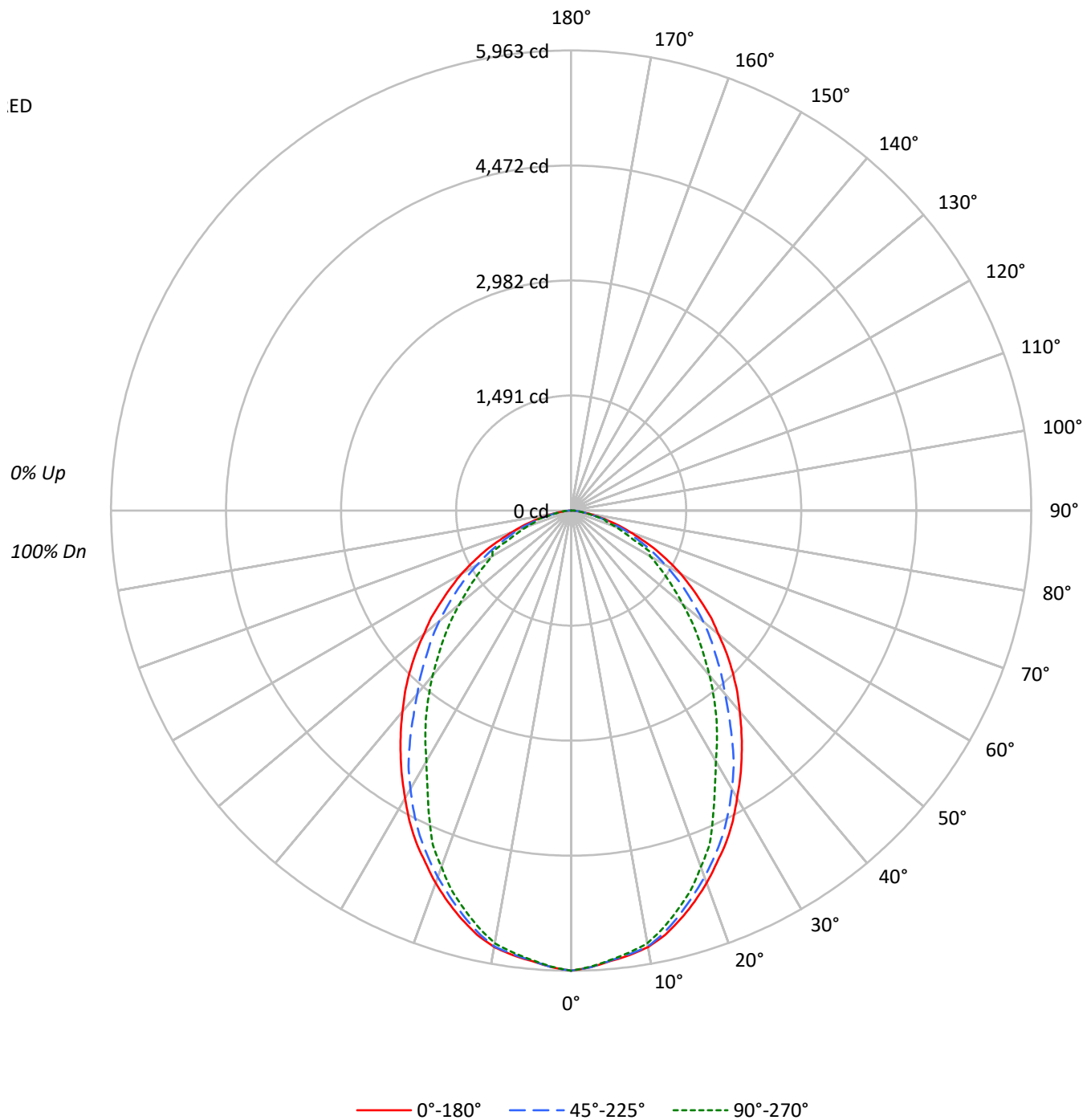
Input Watts (W): 93.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	8023	8023	8023
5°	7914	7905	7895
10°	7845	7836	7779
15°	7634	7557	7451
20°	7354	7235	7038
25°	7051	6898	6468
30°	6683	6469	5826
35°	6330	5979	5390
40°	5969	5449	4904
45°	5627	5037	4434
50°	5209	4675	3954
55°	4819	4237	3541
60°	4415	3784	3172
65°	3885	3314	2809
70°	3200	2902	2386
75°	2544	2222	2329
80°	1709	1602	1495
85°	1064	1277	1490

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5627 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	555.1	4.7
10°-20°	1523.3	13.0
20°-30°	2108.9	18.0
30°-40°	2248.7	19.2
40°-50°	2051.5	17.5
50°-60°	1607.2	13.7
60°-70°	1047.5	8.9
70°-80°	464.1	4.0
80°-90°	99.6	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°	4187.3	35.8
0°-40°	6436.1	55.0
0°-60°	10094.8	86.2
0°-90°	11706.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11706.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5963	5963	5963	5963	5963	
5°	5860	5853	5853	5846	5846	556
15°	5480	5480	5425	5370	5349	1541
25°	4750	4722	4646	4481	4357	2181
35°	3854	3826	3640	3364	3281	2409
45°	2957	2895	2647	2426	2330	2278
55°	2054	1992	1806	1592	1510	1843
65°	1220	1151	1041	1062	882	1202
75°	489	455	427	407	448	525
85°	69	76	83	90	96	96
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5962.9	5962.9	5962.9	5962.9	5962.9
2.5°	5921.5	5921.5	5921.5	5914.6	5914.6
5°	5859.5	5852.6	5852.6	5845.7	5845.7
7.5°	5811.2	5804.3	5797.4	5790.5	5776.8
10°	5742.3	5742.3	5735.4	5700.9	5694.0
12.5°	5632.0	5625.1	5597.5	5549.3	5535.5
15°	5480.3	5480.3	5425.2	5370.0	5349.4
17.5°	5314.9	5308.0	5239.1	5183.9	5156.3
20°	5135.7	5121.9	5052.9	4963.3	4915.1
22.5°	4935.7	4935.7	4853.0	4735.8	4687.6
25°	4749.6	4722.0	4646.2	4480.8	4356.7
27.5°	4535.9	4494.6	4411.8	4177.5	4032.7
30°	4301.5	4280.9	4163.7	3860.4	3750.1
32.5°	4081.0	4046.5	3922.4	3605.3	3515.7
35°	3853.5	3825.9	3639.8	3364.0	3281.3
37.5°	3626.0	3591.5	3357.1	3136.5	3033.1
40°	3398.5	3357.1	3102.1	2902.2	2791.9
42.5°	3184.8	3129.7	2881.5	2667.8	2543.7
45°	2957.3	2895.3	2647.1	2426.5	2330.0
47.5°	2729.8	2674.7	2447.2	2219.7	2109.4
50°	2488.6	2440.3	2233.5	2006.0	1888.8
52.5°	2288.6	2212.8	2012.9	1785.4	1688.9
55°	2054.3	1992.2	1806.1	1592.4	1509.7
57.5°	1840.6	1778.5	1606.2	1406.3	1337.3
60°	1640.7	1551.0	1406.3	1233.9	1178.8
62.5°	1420.1	1351.1	1227.0	1082.3	1151.2
65°	1220.2	1151.2	1040.9	1061.6	882.4
67.5°	999.6	965.1	868.6	772.1	744.5
70°	813.4	772.1	737.6	634.2	606.6
72.5°	648.0	606.6	558.4	503.2	482.5
75°	489.4	455.0	427.4	406.7	448.1
77.5°	337.8	324.0	303.3	282.6	275.7
80°	220.6	213.7	206.8	199.9	193.0
82.5°	131.0	131.0	131.0	131.0	131.0
85°	68.9	75.8	82.7	89.6	96.5
87.5°	41.4	41.4	48.3	55.1	62.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)