

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: P563853

Luminaire Tested: FSR-24-4-LD4-4LO-35-UNV-81-96-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563853
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-81-96-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10976.0 lumens
Efficiency: N/A
Efficacy: 117.3 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

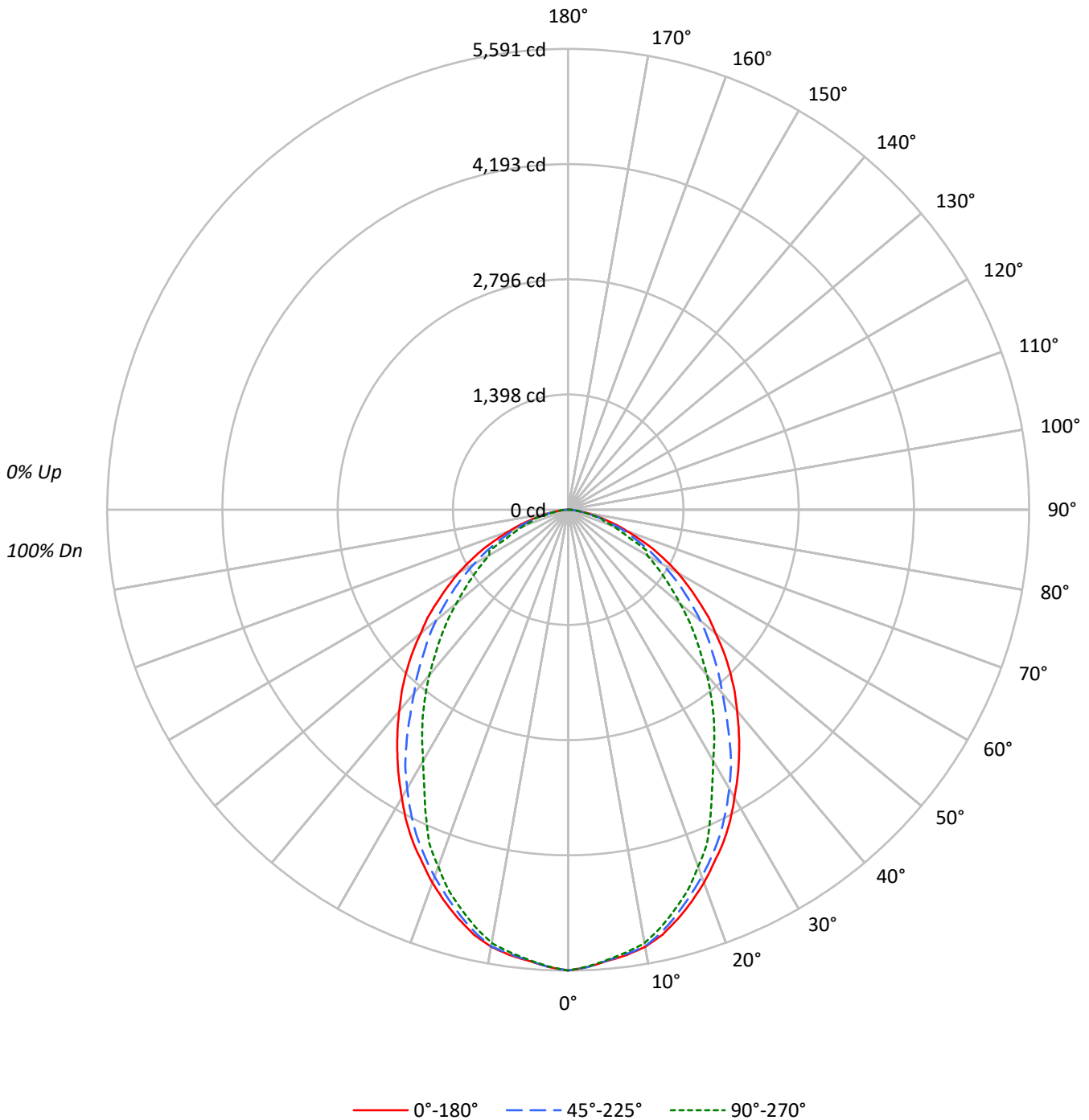
Input Watts (W): 93.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	7523	7523	7523
5°	7420	7412	7403
10°	7356	7347	7294
15°	7158	7086	6987
20°	6895	6784	6599
25°	6611	6468	6065
30°	6266	6065	5463
35°	5935	5606	5054
40°	5597	5109	4598
45°	5276	4723	4157
50°	4884	4384	3707
55°	4518	3973	3320
60°	4140	3548	2974
65°	3642	3107	2634
70°	3000	2721	2238
75°	2386	2083	2184
80°	1602	1502	1402
85°	997	1198	1397

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5276 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	520.4	4.7
10°-20°	1428.3	13.0
20°-30°	1977.4	18.0
30°-40°	2108.5	19.2
40°-50°	1923.6	17.5
50°-60°	1507.0	13.7
60°-70°	982.2	8.9
70°-80°	435.1	4.0
80°-90°	93.4	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°	3926.2	35.8
0°-40°	6034.7	55.0
0°-60°	9465.3	86.2
0°-90°	10976.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10976.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5591	5591	5591	5591	5591	
5°	5494	5488	5488	5481	5481	522
15°	5139	5139	5087	5035	5016	1445
25°	4453	4428	4356	4201	4085	2045
35°	3613	3587	3413	3154	3077	2259
45°	2773	2715	2482	2275	2185	2136
55°	1926	1868	1694	1493	1416	1728
65°	1144	1079	976	995	827	1127
75°	459	427	401	381	420	492
85°	65	71	78	84	90	90
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5591.0	5591.0	5591.0	5591.0	5591.0
2.5°	5552.2	5552.2	5552.2	5545.8	5545.8
5°	5494.1	5487.6	5487.6	5481.1	5481.1
7.5°	5448.8	5442.4	5435.9	5429.4	5416.5
10°	5384.2	5384.2	5377.7	5345.4	5338.9
12.5°	5280.8	5274.3	5248.5	5203.2	5190.3
15°	5138.6	5138.6	5086.9	5035.2	5015.8
17.5°	4983.4	4977.0	4912.3	4860.6	4834.8
20°	4815.4	4802.5	4737.8	4653.8	4608.6
22.5°	4627.9	4627.9	4550.4	4440.5	4395.3
25°	4453.4	4427.6	4356.5	4201.4	4085.0
27.5°	4253.1	4214.3	4136.7	3917.0	3781.2
30°	4033.3	4013.9	3904.0	3619.6	3516.2
32.5°	3826.5	3794.1	3677.8	3380.5	3296.4
35°	3613.2	3587.3	3412.8	3154.2	3076.7
37.5°	3399.9	3367.5	3147.8	2940.9	2844.0
40°	3186.6	3147.8	2908.6	2721.2	2617.8
42.5°	2986.2	2934.5	2701.8	2501.4	2385.1
45°	2772.9	2714.7	2482.0	2275.2	2184.7
47.5°	2559.6	2507.9	2294.6	2081.3	1977.9
50°	2333.4	2288.1	2094.2	1880.9	1771.0
52.5°	2145.9	2074.8	1887.4	1674.1	1583.6
55°	1926.2	1868.0	1693.5	1493.1	1415.5
57.5°	1725.8	1667.6	1506.0	1318.6	1253.9
60°	1538.3	1454.3	1318.6	1157.0	1105.3
62.5°	1331.5	1266.9	1150.5	1014.8	1079.4
65°	1144.1	1079.4	976.0	995.4	827.3
67.5°	937.2	904.9	814.4	723.9	698.1
70°	762.7	723.9	691.6	594.7	568.8
72.5°	607.6	568.8	523.6	471.8	452.5
75°	458.9	426.6	400.7	381.4	420.1
77.5°	316.7	303.8	284.4	265.0	258.5
80°	206.8	200.4	193.9	187.4	181.0
82.5°	122.8	122.8	122.8	122.8	122.8
85°	64.6	71.1	77.6	84.0	90.5
87.5°	38.8	38.8	45.2	51.7	58.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)