

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: P559517

Luminaire Tested: FSR-12-1-LD4-2STD-40-UNV-82-96-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559517
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-12-1-LD4-2STD-40-UNV-82-96-EDD
Description: 1X1 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1465.0 lumens
Efficiency: N/A
Efficacy: 88.3 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

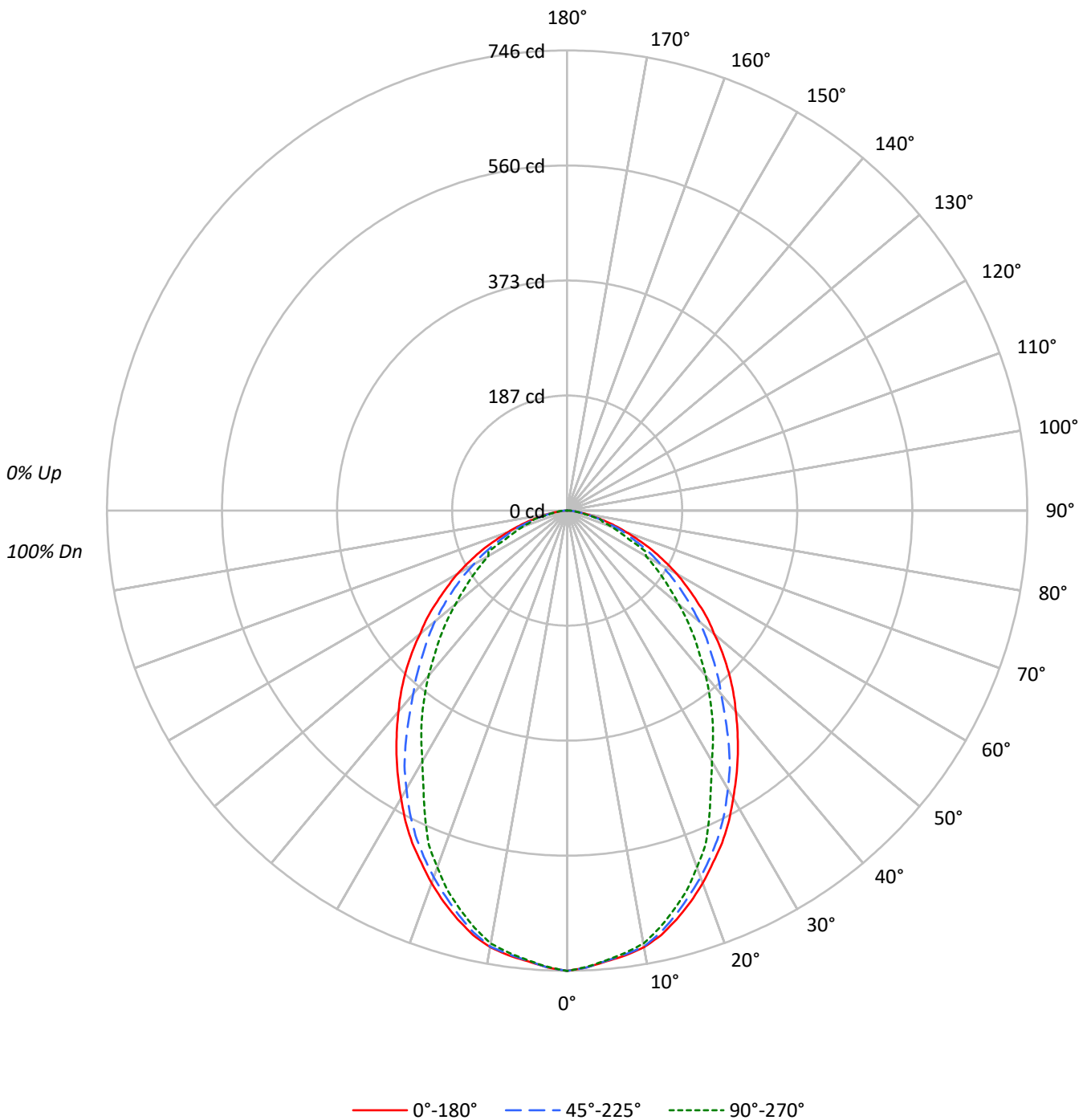
Input Watts (W): 16.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	100	100	100	100	100		
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87	87	87	87	87	87	87		
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75	75	75	75	75	75	75		
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65	65	65	65	65	65	65		
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56	56	56	56	56	56	56		
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50	50	50	50	50	50	50		
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44	44	44	44	44	44	44		
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40	40	40	40	40	40	40		
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36	36	36	36	36	36	36		
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33	33	33	33	33	33	33		
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30	30	30	30	30	30	30		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8033	8033	8033
5°	7923	7914	7905
10°	7854	7846	7789
15°	7643	7567	7461
20°	7362	7244	7046
25°	7059	6906	6475
30°	6691	6477	5833
35°	6338	5985	5397
40°	5976	5455	4910
45°	5634	5043	4439
50°	5215	4680	3959
55°	4825	4241	3545
60°	4420	3789	3175
65°	3889	3319	2812
70°	3204	2905	2389
75°	2549	2225	2333
80°	1711	1605	1500
85°	1062	1284	1494

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5634 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	69.5	4.7
10°-20°	190.6	13.0
20°-30°	263.9	18.0
30°-40°	281.4	19.2
40°-50°	256.7	17.5
50°-60°	201.1	13.7
60°-70°	131.1	8.9
70°-80°	58.1	4.0
80°-90°	12.5	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°	524.0	35.8
0°-40°	805.5	55.0
0°-60°	1263.3	86.2
0°-90°	1465.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1465.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	746	746	746	746	746	
5°	733	732	732	732	732	70
15°	686	686	679	672	670	193
25°	594	591	582	561	545	273
35°	482	479	456	421	411	301
45°	370	362	331	304	292	285
55°	257	249	226	199	189	231
65°	153	144	130	133	110	150
75°	61	57	54	51	56	66
85°	9	10	10	11	12	12
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	746.3	746.3	746.3	746.3	746.3
2.5°	741.1	741.1	741.1	740.2	740.2
5°	733.3	732.4	732.4	731.6	731.6
7.5°	727.3	726.4	725.5	724.7	723.0
10°	718.6	718.6	717.8	713.5	712.6
12.5°	704.8	704.0	700.5	694.5	692.8
15°	685.9	685.9	679.0	672.1	669.5
17.5°	665.2	664.3	655.7	648.8	645.3
20°	642.7	641.0	632.4	621.2	615.1
22.5°	617.7	617.7	607.4	592.7	586.6
25°	594.4	591.0	581.5	560.8	545.2
27.5°	567.7	562.5	552.1	522.8	504.7
30°	538.3	535.7	521.1	483.1	469.3
32.5°	510.7	506.4	490.9	451.2	440.0
35°	482.3	478.8	455.5	421.0	410.7
37.5°	453.8	449.5	420.1	392.5	379.6
40°	425.3	420.1	388.2	363.2	349.4
42.5°	398.6	391.7	360.6	333.9	318.3
45°	370.1	362.3	331.3	303.7	291.6
47.5°	341.6	334.7	306.3	277.8	264.0
50°	311.4	305.4	279.5	251.1	236.4
52.5°	286.4	276.9	251.9	223.4	211.4
55°	257.1	249.3	226.0	199.3	188.9
57.5°	230.3	222.6	201.0	176.0	167.4
60°	205.3	194.1	176.0	154.4	147.5
62.5°	177.7	169.1	153.6	135.4	144.1
65°	152.7	144.1	130.3	132.9	110.4
67.5°	125.1	120.8	108.7	96.6	93.2
70°	101.8	96.6	92.3	79.4	75.9
72.5°	81.1	75.9	69.9	63.0	60.4
75°	61.3	56.9	53.5	50.9	56.1
77.5°	42.3	40.5	38.0	35.4	34.5
80°	27.6	26.7	25.9	25.0	24.2
82.5°	16.4	16.4	16.4	16.4	16.4
85°	8.6	9.5	10.4	11.2	12.1
87.5°	5.2	5.2	6.0	6.9	7.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)