

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: P559504

Luminaire Tested: FSR-12-1-LD4-2STD-40-UNV-82-84-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559504
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-82-84-EDD-90
Description: 1X1 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1242.0 lumens
Efficiency: N/A
Efficacy: 74.8 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

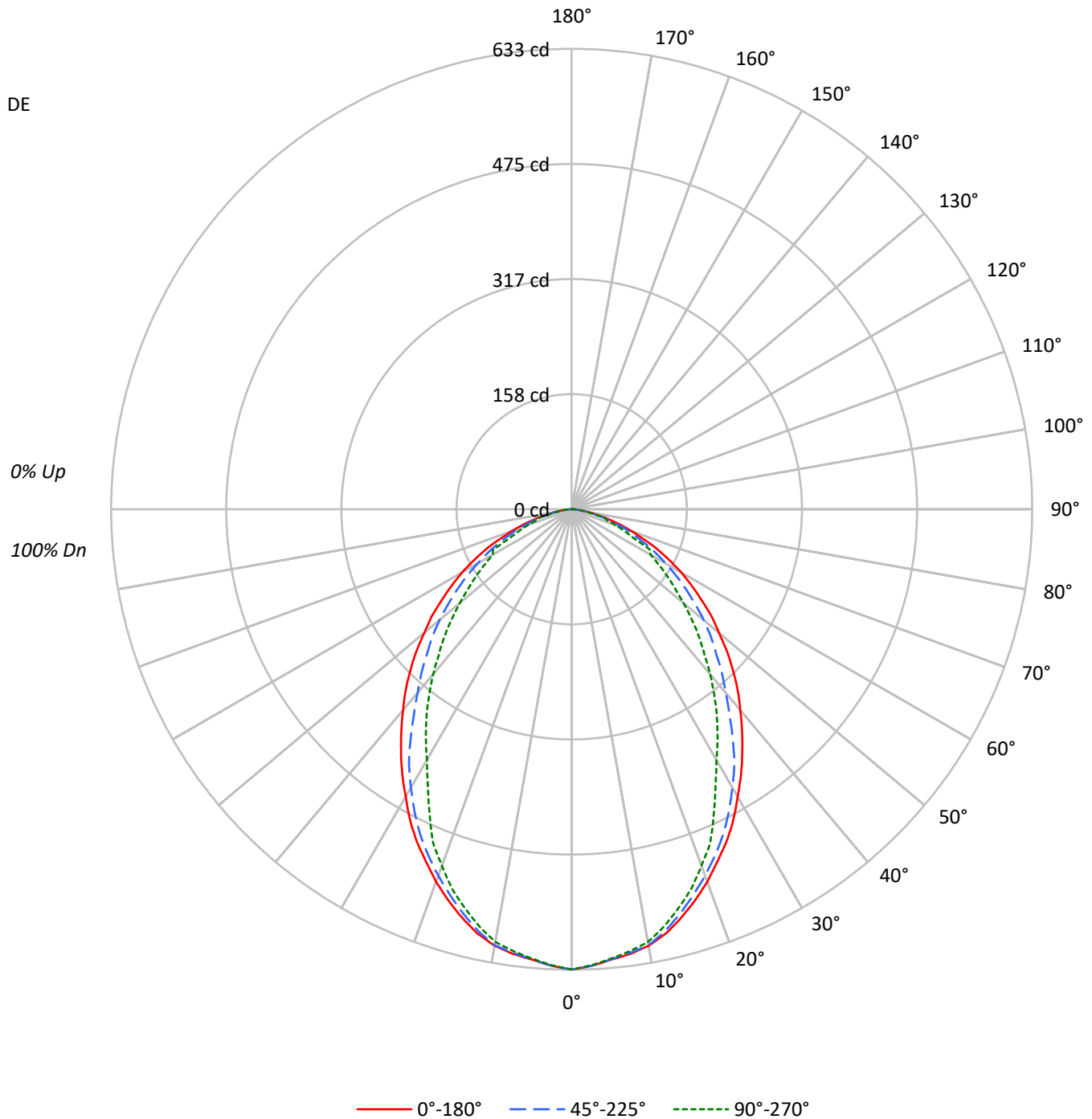
Input Watts (W): 16.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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			
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°	6810	6810	6810
5°	6717	6710	6701
10°	6660	6651	6603
15°	6480	6414	6325
20°	6242	6141	5974
25°	5985	5855	5489
30°	5673	5491	4946
35°	5373	5075	4574
40°	5067	4624	4162
45°	4777	4276	3763
50°	4421	3969	3356
55°	4091	3596	3006
60°	3748	3212	2693
65°	3298	2812	2384
70°	2716	2464	2027
75°	2158	1884	1975
80°	1450	1358	1271
85°	902	1087	1260

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4777 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	58.9	4.7
10°-20°	161.6	13.0
20°-30°	223.8	18.0
30°-40°	238.6	19.2
40°-50°	217.7	17.5
50°-60°	170.5	13.7
60°-70°	111.1	8.9
70°-80°	49.2	4.0
80°-90°	10.6	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°	444.3	35.8
0°-40°	682.9	55.0
0°-60°	1071.1	86.2
0°-90°	1242.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1242.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	633	633	633	633	633	
5°	622	621	621	620	620	59
15°	582	582	576	570	568	163
25°	504	501	493	475	462	231
35°	409	406	386	357	348	256
45°	314	307	281	258	247	242
55°	218	211	192	169	160	195
65°	130	122	110	113	94	128
75°	52	48	45	43	48	56
85°	7	8	9	10	10	10
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	632.7	632.7	632.7	632.7	632.7
2.5°	628.3	628.3	628.3	627.5	627.5
5°	621.7	621.0	621.0	620.2	620.2
7.5°	616.6	615.8	615.1	614.4	612.9
10°	609.3	609.3	608.5	604.9	604.1
12.5°	597.6	596.8	593.9	588.8	587.3
15°	581.5	581.5	575.6	569.8	567.6
17.5°	563.9	563.2	555.9	550.0	547.1
20°	544.9	543.4	536.1	526.6	521.5
22.5°	523.7	523.7	514.9	502.5	497.3
25°	503.9	501.0	493.0	475.4	462.2
27.5°	481.3	476.9	468.1	443.2	427.9
30°	456.4	454.2	441.8	409.6	397.9
32.5°	433.0	429.3	416.2	382.5	373.0
35°	408.9	405.9	386.2	356.9	348.1
37.5°	384.7	381.1	356.2	332.8	321.8
40°	360.6	356.2	329.1	307.9	296.2
42.5°	337.9	332.1	305.7	283.1	269.9
45°	313.8	307.2	280.9	257.5	247.2
47.5°	289.6	283.8	259.6	235.5	223.8
50°	264.0	258.9	237.0	212.8	200.4
52.5°	242.8	234.8	213.6	189.4	179.2
55°	218.0	211.4	191.6	169.0	160.2
57.5°	195.3	188.7	170.4	149.2	141.9
60°	174.1	164.6	149.2	130.9	125.1
62.5°	150.7	143.4	130.2	114.8	122.1
65°	129.5	122.1	110.4	112.6	93.6
67.5°	106.1	102.4	92.2	81.9	79.0
70°	86.3	81.9	78.3	67.3	64.4
72.5°	68.8	64.4	59.2	53.4	51.2
75°	51.9	48.3	45.3	43.2	47.5
77.5°	35.8	34.4	32.2	30.0	29.3
80°	23.4	22.7	21.9	21.2	20.5
82.5°	13.9	13.9	13.9	13.9	13.9
85°	7.3	8.0	8.8	9.5	10.2
87.5°	4.4	4.4	5.1	5.9	6.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)