

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: P559424

Luminaire Tested: FSR-12-1-LD4-2STD-35-UNV-81-84-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559424
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-35-UNV-81-84-EDD-90
Description: 1X1 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1251.0 lumens
Efficiency: N/A
Efficacy: 75.4 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

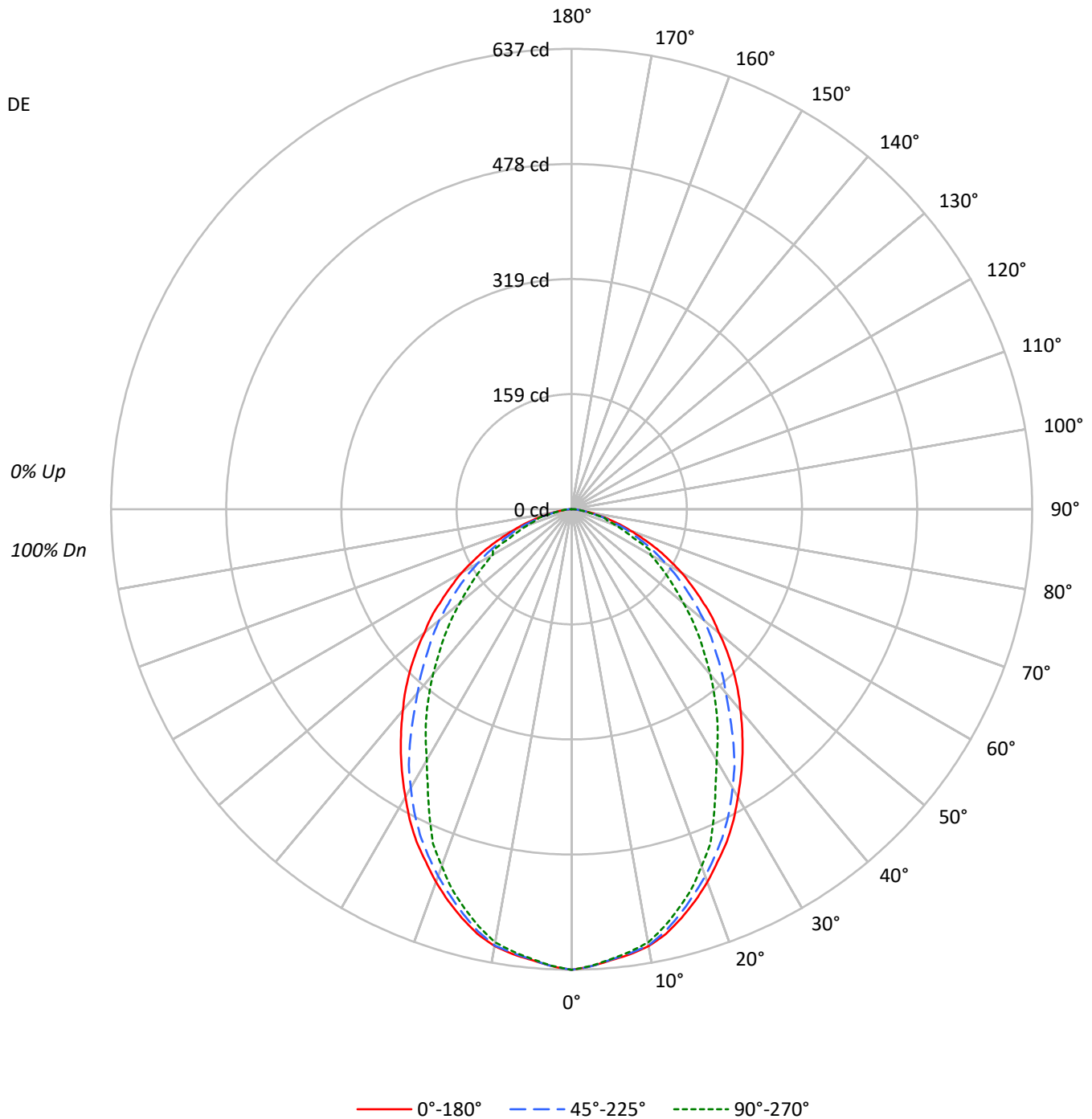
Input Watts (W): 16.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	6859	6859	6859
5°	6766	6759	6750
10°	6708	6699	6651
15°	6527	6461	6371
20°	6286	6186	6017
25°	6029	5897	5530
30°	5714	5531	4982
35°	5411	5112	4608
40°	5103	4658	4193
45°	4810	4306	3790
50°	4453	3997	3381
55°	4119	3622	3027
60°	3774	3236	2713
65°	3321	2832	2402
70°	2735	2480	2039
75°	2175	1901	1992
80°	1463	1370	1277
85°	914	1087	1272

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4810 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	59.3	4.7
10°-20°	162.8	13.0
20°-30°	225.4	18.0
30°-40°	240.3	19.2
40°-50°	219.2	17.5
50°-60°	171.8	13.7
60°-70°	111.9	8.9
70°-80°	49.6	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°	447.5	35.8
0°-40°	687.8	55.0
0°-60°	1078.8	86.2
0°-90°	1251.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1251.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	637	637	637	637	637	
5°	626	626	626	625	625	59
15°	586	586	580	574	572	165
25°	508	505	496	479	466	233
35°	412	409	389	360	351	257
45°	316	309	283	259	249	243
55°	220	213	193	170	161	197
65°	130	123	111	114	94	129
75°	52	49	46	44	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°	637.2	637.2	637.2	637.2	637.2
2.5°	632.8	632.8	632.8	632.1	632.1
5°	626.2	625.5	625.5	624.7	624.7
7.5°	621.0	620.3	619.6	618.8	617.4
10°	613.7	613.7	612.9	609.2	608.5
12.5°	601.9	601.1	598.2	593.0	591.6
15°	585.7	585.7	579.8	573.9	571.7
17.5°	568.0	567.3	559.9	554.0	551.0
20°	548.8	547.4	540.0	530.4	525.3
22.5°	527.5	527.5	518.6	506.1	501.0
25°	507.6	504.6	496.5	478.9	465.6
27.5°	484.7	480.3	471.5	446.4	431.0
30°	459.7	457.5	445.0	412.6	400.8
32.5°	436.1	432.4	419.2	385.3	375.7
35°	411.8	408.9	389.0	359.5	350.7
37.5°	387.5	383.8	358.8	335.2	324.1
40°	363.2	358.8	331.5	310.1	298.4
42.5°	340.4	334.5	307.9	285.1	271.8
45°	316.0	309.4	282.9	259.3	249.0
47.5°	291.7	285.8	261.5	237.2	225.4
50°	265.9	260.8	238.7	214.4	201.9
52.5°	244.6	236.5	215.1	190.8	180.5
55°	219.5	212.9	193.0	170.2	161.3
57.5°	196.7	190.1	171.7	150.3	142.9
60°	175.3	165.8	150.3	131.9	126.0
62.5°	151.8	144.4	131.1	115.7	123.0
65°	130.4	123.0	111.2	113.5	94.3
67.5°	106.8	103.1	92.8	82.5	79.6
70°	86.9	82.5	78.8	67.8	64.8
72.5°	69.2	64.8	59.7	53.8	51.6
75°	52.3	48.6	45.7	43.5	47.9
77.5°	36.1	34.6	32.4	30.2	29.5
80°	23.6	22.8	22.1	21.4	20.6
82.5°	14.0	14.0	14.0	14.0	14.0
85°	7.4	8.1	8.8	9.6	10.3
87.5°	4.4	4.4	5.2	5.9	6.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)