

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: P558940

Luminaire Tested: FSR-12-1-LD4-1STD-40-UNV-82-96-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P558940
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-LD4-1STD-40-UNV-82-96-EDD-90
Description: 1X1 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 616.0 lumens
Efficiency: N/A
Efficacy: 74.2 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

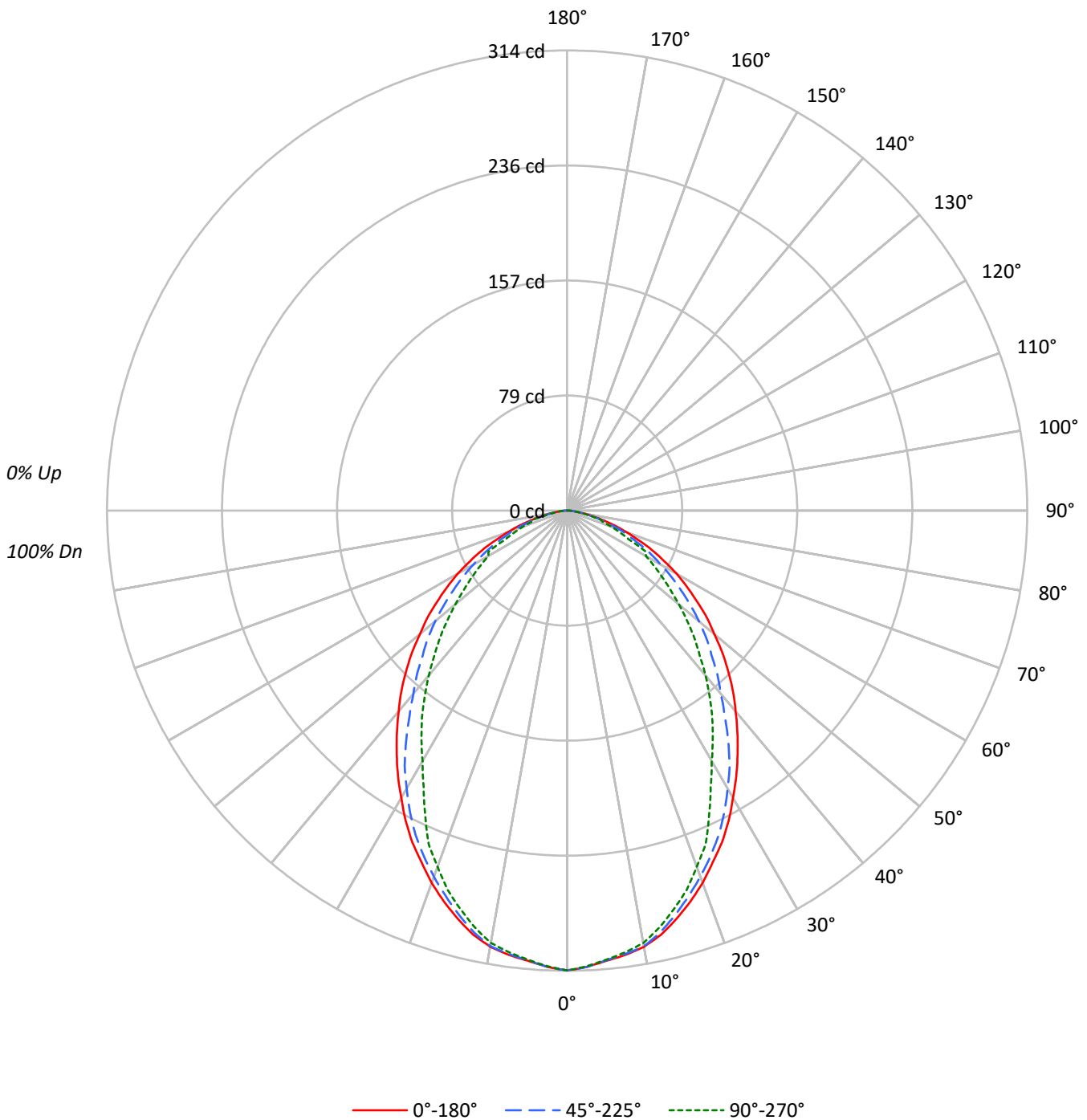
Input Watts (W): 8.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	0																			
RCR																																														
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	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°	3378	3378	3378
5°	3331	3328	3324
10°	3303	3299	3275
15°	3214	3182	3137
20°	3096	3046	2962
25°	2968	2904	2723
30°	2814	2723	2452
35°	2665	2516	2269
40°	2512	2293	2064
45°	2369	2120	1866
50°	2194	1968	1665
55°	2029	1783	1490
60°	1858	1593	1335
65°	1635	1396	1182
70°	1347	1221	1004
75°	1073	936	981
80°	719	676	632
85°	445	543	630

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2369 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	29.2	4.7
10°-20°	80.2	13.0
20°-30°	111.0	18.0
30°-40°	118.3	19.2
40°-50°	108.0	17.5
50°-60°	84.6	13.7
60°-70°	55.1	8.9
70°-80°	24.4	4.0
80°-90°	5.2	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°	220.3	35.8
0°-40°	338.7	55.0
0°-60°	531.2	86.2
0°-90°	616.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	616.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	314	314	314	314	314	
5°	308	308	308	308	308	29
15°	288	288	286	283	282	81
25°	250	248	244	236	229	115
35°	203	201	192	177	173	127
45°	156	152	139	128	123	120
55°	108	105	95	84	79	97
65°	64	61	55	56	46	63
75°	26	24	22	21	24	28
85°	4	4	4	5	5	5
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	<i>313.8</i>	<i>313.8</i>	<i>313.8</i>	<i>313.8</i>	<i>313.8</i>
2.5°	<i>311.6</i>	311.6	311.6	311.2	311.2
5°	<i>308.3</i>	308.0	308.0	307.6	307.6
7.5°	<i>305.8</i>	305.4	305.1	304.7	304.0
10°	<i>302.2</i>	302.2	301.8	300.0	299.6
12.5°	<i>296.4</i>	296.0	294.6	292.0	291.3
15°	<i>288.4</i>	288.4	285.5	282.6	281.5
17.5°	<i>279.7</i>	279.3	275.7	272.8	271.3
20°	<i>270.3</i>	269.5	265.9	261.2	258.6
22.5°	<i>259.7</i>	259.7	255.4	249.2	246.7
25°	<i>249.9</i>	248.5	244.5	235.8	229.3
27.5°	<i>238.7</i>	236.5	232.2	219.8	212.2
30°	<i>226.4</i>	225.3	219.1	203.1	197.3
32.5°	<i>214.8</i>	212.9	206.4	189.7	185.0
35°	<i>202.8</i>	201.3	191.5	177.0	172.7
37.5°	<i>190.8</i>	189.0	176.7	165.1	159.6
40°	<i>178.8</i>	176.7	163.2	152.7	146.9
42.5°	<i>167.6</i>	164.7	151.6	140.4	133.9
45°	<i>155.6</i>	152.4	139.3	127.7	122.6
47.5°	<i>143.7</i>	140.7	128.8	116.8	111.0
50°	<i>131.0</i>	128.4	117.5	105.6	99.4
52.5°	<i>120.4</i>	116.4	105.9	94.0	88.9
55°	<i>108.1</i>	104.8	95.0	83.8	79.4
57.5°	<i>96.9</i>	93.6	84.5	74.0	70.4
60°	<i>86.3</i>	81.6	74.0	64.9	62.0
62.5°	<i>74.7</i>	71.1	64.6	57.0	60.6
65°	<i>64.2</i>	60.6	54.8	55.9	46.4
67.5°	<i>52.6</i>	50.8	45.7	40.6	39.2
70°	<i>42.8</i>	40.6	38.8	33.4	31.9
72.5°	<i>34.1</i>	31.9	29.4	26.5	25.4
75°	<i>25.8</i>	23.9	22.5	21.4	23.6
77.5°	<i>17.8</i>	17.0	16.0	14.9	14.5
80°	<i>11.6</i>	11.2	10.9	10.5	10.2
82.5°	<i>6.9</i>	6.9	6.9	6.9	6.9
85°	<i>3.6</i>	4.0	4.4	4.7	5.1
87.5°	<i>2.2</i>	2.2	2.5	2.9	3.3
90°	<i>0.0</i>	0.0	0.0	0.0	0.0

(END OF REPORT)