

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: P558938

Luminaire Tested: FSR-12-1-LD4-1STD-40-UNV-82-94-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P558938
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-82-94-EDD-90
Description: 1X1 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 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: 622.0 lumens
Efficiency: N/A
Efficacy: 74.9 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

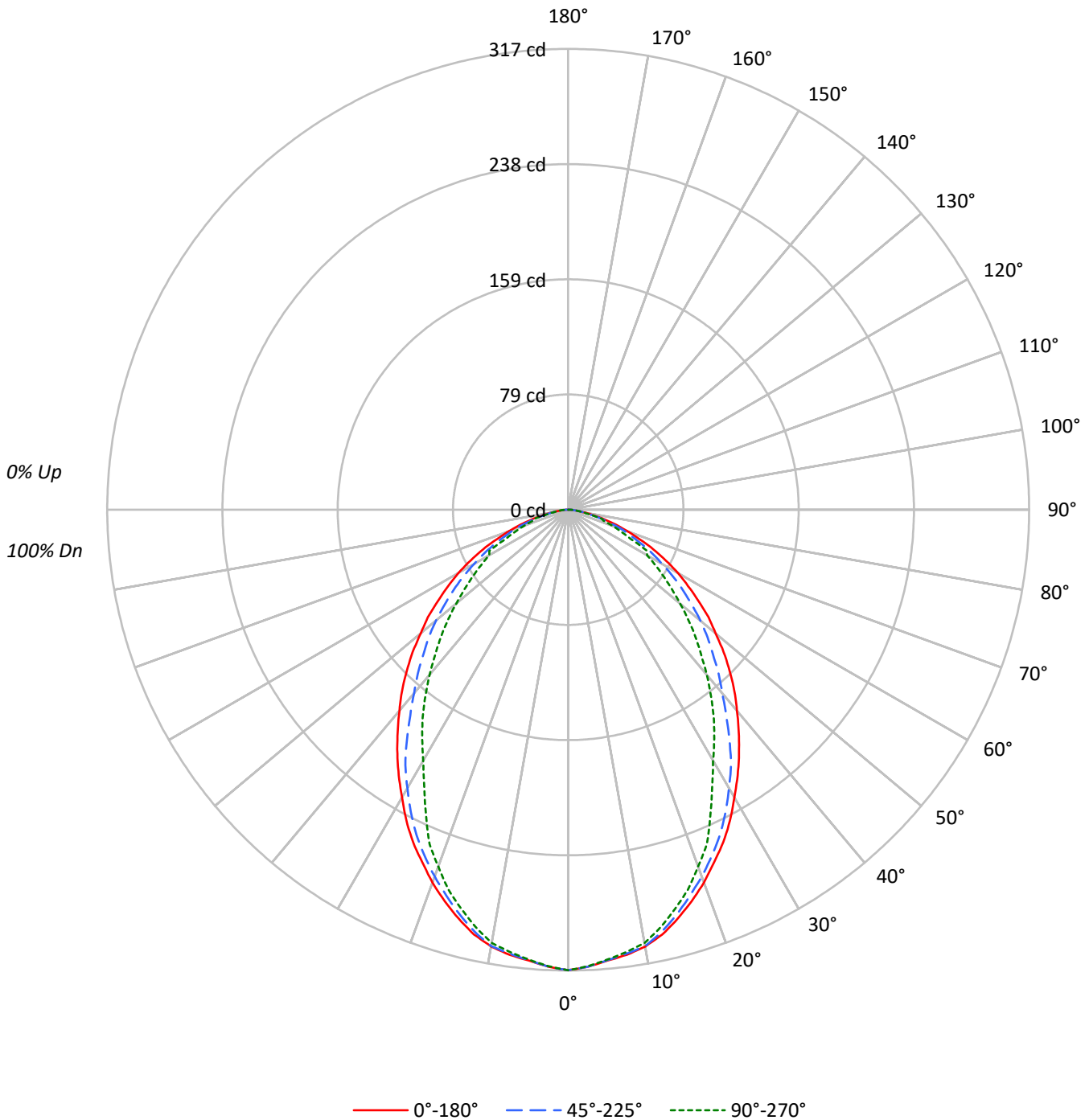
Input Watts (W): 8.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	3410	3410	3410
5°	3364	3360	3356
10°	3335	3331	3307
15°	3245	3213	3167
20°	3126	3076	2992
25°	2998	2932	2749
30°	2841	2749	2477
35°	2691	2541	2292
40°	2538	2316	2084
45°	2391	2142	1885
50°	2214	1988	1681
55°	2049	1802	1505
60°	1877	1608	1348
65°	1650	1408	1195
70°	1360	1234	1013
75°	1081	944	990
80°	725	682	638
85°	457	543	630

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2391 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	29.5	4.7
10°-20°	80.9	13.0
20°-30°	112.1	18.0
30°-40°	119.5	19.2
40°-50°	109.0	17.5
50°-60°	85.4	13.7
60°-70°	55.7	8.9
70°-80°	24.7	4.0
80°-90°	5.3	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°	222.5	35.8
0°-40°	342.0	55.0
0°-60°	536.4	86.2
0°-90°	622.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	622.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	317	317	317	317	317	
5°	311	311	311	311	311	30
15°	291	291	288	285	284	82
25°	252	251	247	238	232	116
35°	205	203	193	179	174	128
45°	157	154	141	129	124	121
55°	109	106	96	85	80	98
65°	65	61	55	56	47	64
75°	26	24	23	22	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>316.8</i>	<i>316.8</i>	<i>316.8</i>	<i>316.8</i>	<i>316.8</i>
2.5°	<i>314.6</i>	314.6	314.6	314.3	314.3
5°	<i>311.3</i>	311.0	311.0	310.6	310.6
7.5°	<i>308.8</i>	308.4	308.0	307.7	306.9
10°	<i>305.1</i>	305.1	304.8	302.9	302.6
12.5°	<i>299.3</i>	298.9	297.4	294.9	294.1
15°	<i>291.2</i>	291.2	288.3	285.3	284.2
17.5°	<i>282.4</i>	282.0	278.4	275.4	274.0
20°	<i>272.9</i>	272.2	268.5	263.7	261.2
22.5°	<i>262.3</i>	262.3	257.9	251.6	249.1
25°	<i>252.4</i>	250.9	246.9	238.1	231.5
27.5°	<i>241.0</i>	238.8	234.4	222.0	214.3
30°	<i>228.6</i>	227.5	221.2	205.1	199.3
32.5°	<i>216.8</i>	215.0	208.4	191.6	186.8
35°	<i>204.8</i>	203.3	193.4	178.7	174.4
37.5°	<i>192.7</i>	190.8	178.4	166.7	161.2
40°	<i>180.6</i>	178.4	164.8	154.2	148.3
42.5°	<i>169.2</i>	166.3	153.1	141.8	135.2
45°	<i>157.1</i>	153.8	140.7	128.9	123.8
47.5°	<i>145.0</i>	142.1	130.0	117.9	112.1
50°	<i>132.2</i>	129.7	118.7	106.6	100.4
52.5°	<i>121.6</i>	117.6	107.0	94.9	89.7
55°	<i>109.2</i>	105.9	96.0	84.6	80.2
57.5°	<i>97.8</i>	94.5	85.3	74.7	71.1
60°	<i>87.2</i>	82.4	74.7	65.6	62.6
62.5°	<i>75.5</i>	71.8	65.2	57.5	61.2
65°	<i>64.8</i>	61.2	55.3	56.4	46.9
67.5°	<i>53.1</i>	51.3	46.2	41.0	39.6
70°	<i>43.2</i>	41.0	39.2	33.7	32.2
72.5°	<i>34.4</i>	32.2	29.7	26.7	25.6
75°	<i>26.0</i>	24.2	22.7	21.6	23.8
77.5°	<i>17.9</i>	17.2	16.1	15.0	14.7
80°	<i>11.7</i>	11.4	11.0	10.6	10.3
82.5°	<i>7.0</i>	7.0	7.0	7.0	7.0
85°	<i>3.7</i>	4.0	4.4	4.8	5.1
87.5°	<i>2.2</i>	2.2	2.6	2.9	3.3
90°	<i>0.0</i>	0.0	0.0	0.0	0.0

(END OF REPORT)