

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: P558919

Luminaire Tested: FSR-12-1-LD4-1STD-40-UNV-81-87-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P558919
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-81-87-EDD
Description: 1X1 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 708.0 lumens
Efficiency: N/A
Efficacy: 85.3 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

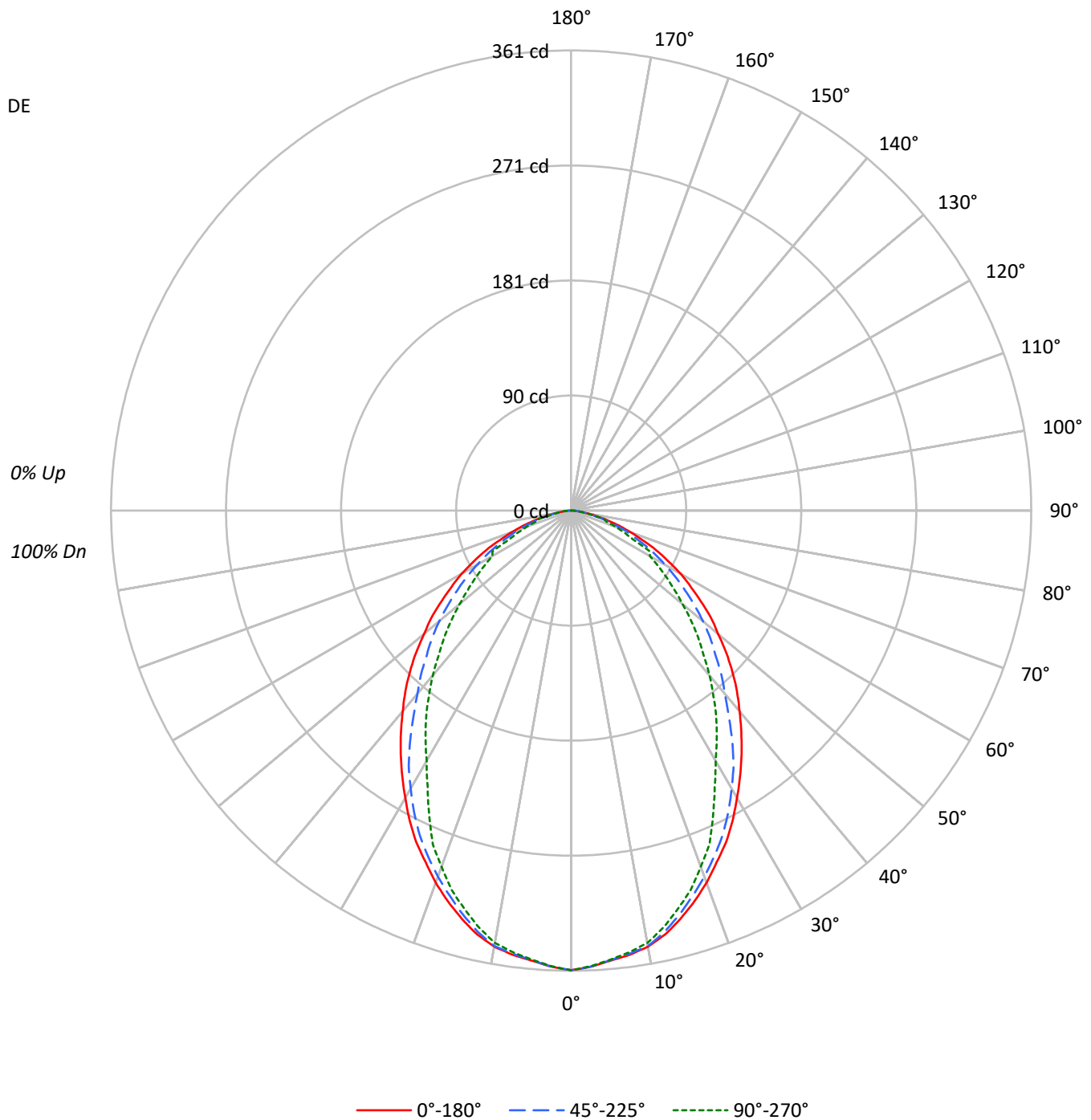
Input Watts (W): 8.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	3881	3881	3881
5°	3829	3825	3821
10°	3796	3792	3764
15°	3694	3656	3605
20°	3558	3501	3405
25°	3412	3337	3130
30°	3234	3130	2819
35°	3063	2892	2608
40°	2888	2636	2373
45°	2723	2437	2145
50°	2520	2262	1912
55°	2331	2049	1713
60°	2136	1832	1535
65°	1880	1605	1360
70°	1548	1404	1155
75°	1231	1073	1127
80°	824	775	725
85°	519	618	716

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2723 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	33.6	4.7
10°-20°	92.1	13.0
20°-30°	127.5	18.0
30°-40°	136.0	19.2
40°-50°	124.1	17.5
50°-60°	97.2	13.7
60°-70°	63.4	8.9
70°-80°	28.1	4.0
80°-90°	6.0	0.8
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°	253.3	35.8
0°-40°	389.3	55.0
0°-60°	610.5	86.2
0°-90°	708.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	708.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	361	361	361	361	361	
5°	354	354	354	354	354	34
15°	332	332	328	325	324	93
25°	287	286	281	271	264	132
35°	233	231	220	204	198	146
45°	179	175	160	147	141	138
55°	124	120	109	96	91	111
65°	74	70	63	64	53	73
75°	30	28	26	25	27	32
85°	4	5	5	5	6	6
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	360.6	360.6	360.6	360.6	360.6
2.5°	358.1	358.1	358.1	357.7	357.7
5°	354.4	354.0	354.0	353.6	353.6
7.5°	351.5	351.1	350.6	350.2	349.4
10°	347.3	347.3	346.9	344.8	344.4
12.5°	340.6	340.2	338.5	335.6	334.8
15°	331.5	331.5	328.1	324.8	323.5
17.5°	321.5	321.0	316.9	313.5	311.9
20°	310.6	309.8	305.6	300.2	297.3
22.5°	298.5	298.5	293.5	286.4	283.5
25°	287.3	285.6	281.0	271.0	263.5
27.5°	274.3	271.8	266.8	252.7	243.9
30°	260.2	258.9	251.8	233.5	226.8
32.5°	246.8	244.7	237.2	218.1	212.6
35°	233.1	231.4	220.1	203.5	198.5
37.5°	219.3	217.2	203.0	189.7	183.4
40°	205.5	203.0	187.6	175.5	168.9
42.5°	192.6	189.3	174.3	161.4	153.8
45°	178.9	175.1	160.1	146.8	140.9
47.5°	165.1	161.8	148.0	134.3	127.6
50°	150.5	147.6	135.1	121.3	114.2
52.5°	138.4	133.8	121.7	108.0	102.1
55°	124.2	120.5	109.2	96.3	91.3
57.5°	111.3	107.6	97.1	85.1	80.9
60°	99.2	93.8	85.1	74.6	71.3
62.5°	85.9	81.7	74.2	65.5	69.6
65°	73.8	69.6	63.0	64.2	53.4
67.5°	60.5	58.4	52.5	46.7	45.0
70°	49.2	46.7	44.6	38.4	36.7
72.5°	39.2	36.7	33.8	30.4	29.2
75°	29.6	27.5	25.8	24.6	27.1
77.5°	20.4	19.6	18.3	17.1	16.7
80°	13.3	12.9	12.5	12.1	11.7
82.5°	7.9	7.9	7.9	7.9	7.9
85°	4.2	4.6	5.0	5.4	5.8
87.5°	2.5	2.5	2.9	3.3	3.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)