

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: P559509

Luminaire Tested: FSR-12-1-LD4-2STD-40-UNV-82-86-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559509
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-82-86-EDD
Description: 1X1 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1433.0 lumens
Efficiency: N/A
Efficacy: 86.3 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

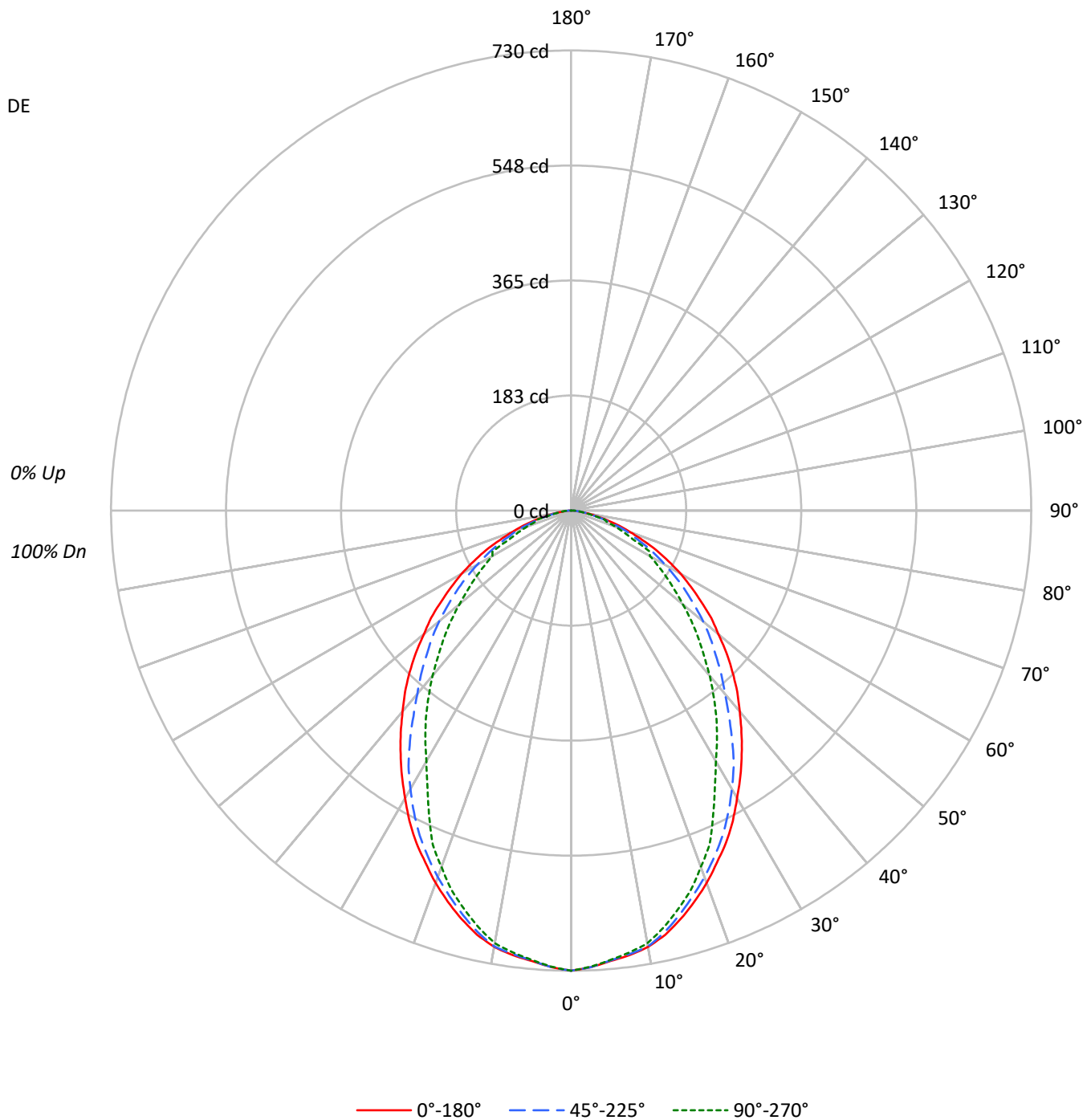
Input Watts (W): 16.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	7858	7858	7858
5°	7750	7741	7732
10°	7683	7674	7618
15°	7476	7400	7297
20°	7202	7086	6892
25°	6905	6755	6334
30°	6545	6335	5706
35°	6198	5855	5278
40°	5845	5335	4803
45°	5511	4932	4341
50°	5101	4578	3872
55°	4720	4149	3468
60°	4323	3707	3106
65°	3805	3245	2751
70°	3135	2842	2338
75°	2491	2175	2283
80°	1674	1568	1463
85°	1037	1247	1457

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5511 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	67.9	4.7
10°-20°	186.5	13.0
20°-30°	258.2	18.0
30°-40°	275.3	19.2
40°-50°	251.1	17.5
50°-60°	196.7	13.7
60°-70°	128.2	8.9
70°-80°	56.8	4.0
80°-90°	12.2	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°	512.6	35.8
0°-40°	787.9	55.0
0°-60°	1235.8	86.2
0°-90°	1433.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1433.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	730	730	730	730	730	
5°	717	716	716	716	716	68
15°	671	671	664	657	655	189
25°	581	578	569	548	533	267
35°	472	468	446	412	402	295
45°	362	354	324	297	285	279
55°	252	244	221	195	185	226
65°	149	141	127	130	108	147
75°	60	56	52	50	55	64
85°	8	9	10	11	12	12
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	730.0	730.0	730.0	730.0	730.0
2.5°	724.9	724.9	724.9	724.0	724.0
5°	717.3	716.4	716.4	715.6	715.6
7.5°	711.4	710.5	709.7	708.9	707.2
10°	702.9	702.9	702.1	697.9	697.0
12.5°	689.4	688.6	685.2	679.3	677.6
15°	670.9	670.9	664.1	657.4	654.8
17.5°	650.6	649.8	641.3	634.6	631.2
20°	628.7	627.0	618.6	607.6	601.7
22.5°	604.2	604.2	594.1	579.7	573.8
25°	581.4	578.1	568.8	548.5	533.3
27.5°	555.3	550.2	540.1	511.4	493.7
30°	526.6	524.0	509.7	472.6	459.1
32.5°	499.6	495.4	480.2	441.3	430.4
35°	471.7	468.4	445.6	411.8	401.7
37.5°	443.9	439.7	411.0	384.0	371.3
40°	416.0	411.0	379.7	355.3	341.8
42.5°	389.9	383.1	352.7	326.6	311.4
45°	362.0	354.4	324.0	297.0	285.2
47.5°	334.2	327.4	299.6	271.7	258.2
50°	304.6	298.7	273.4	245.6	231.2
52.5°	280.2	270.9	246.4	218.6	206.7
55°	251.5	243.9	221.1	194.9	184.8
57.5°	225.3	217.7	196.6	172.2	163.7
60°	200.8	189.9	172.2	151.1	144.3
62.5°	173.8	165.4	150.2	132.5	140.9
65°	149.4	140.9	127.4	130.0	108.0
67.5°	122.4	118.1	106.3	94.5	91.1
70°	99.6	94.5	90.3	77.6	74.3
72.5°	79.3	74.3	68.4	61.6	59.1
75°	59.9	55.7	52.3	49.8	54.9
77.5°	41.3	39.7	37.1	34.6	33.8
80°	27.0	26.2	25.3	24.5	23.6
82.5°	16.0	16.0	16.0	16.0	16.0
85°	8.4	9.3	10.1	11.0	11.8
87.5°	5.1	5.1	5.9	6.8	7.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)