

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: P559876

Luminaire Tested: FSR-12-2-LD4-1LO-40-UNV-81-86-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559876
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-12-2-LD4-1LO-40-UNV-81-86-EDD-90
Description: 1X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 890.0 lumens
Efficiency: N/A
Efficacy: 76.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

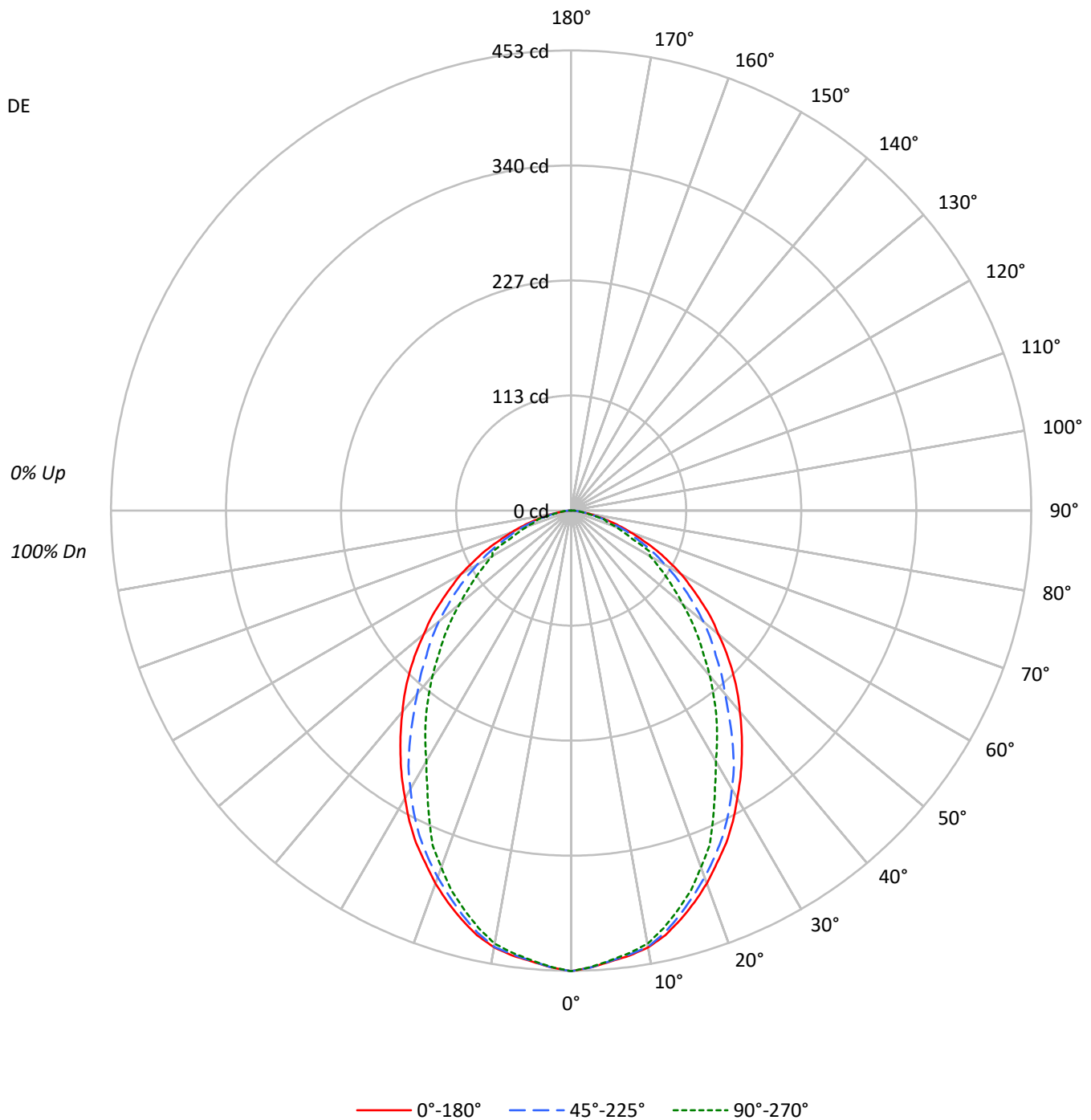
Input Watts (W): 11.7
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	2440	2440	2440
5°	2407	2404	2401
10°	2386	2383	2366
15°	2322	2298	2266
20°	2237	2200	2140
25°	2144	2097	1967
30°	2032	1968	1772
35°	1925	1818	1639
40°	1815	1657	1492
45°	1711	1532	1348
50°	1584	1422	1202
55°	1466	1288	1077
60°	1342	1151	964
65°	1182	1007	855
70°	972	883	725
75°	774	676	709
80°	521	487	456
85°	321	389	451

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1711 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	42.2	4.7
10°-20°	115.8	13.0
20°-30°	160.3	18.0
30°-40°	171.0	19.2
40°-50°	156.0	17.5
50°-60°	122.2	13.7
60°-70°	79.6	8.9
70°-80°	35.3	4.0
80°-90°	7.6	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°	318.4	35.8
0°-40°	489.3	55.0
0°-60°	767.5	86.2
0°-90°	890.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	890.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	453	453	453	453	453	
5°	446	445	445	444	444	42
15°	417	417	412	408	407	117
25°	361	359	353	341	331	166
35°	293	291	277	256	250	183
45°	225	220	201	184	177	173
55°	156	152	137	121	115	140
65°	93	88	79	81	67	91
75°	37	35	32	31	34	40
85°	5	6	6	7	7	7
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	453.4	453.4	453.4	453.4	453.4
2.5°	450.2	450.2	450.2	449.7	449.7
5°	445.5	445.0	445.0	444.4	444.4
7.5°	441.8	441.3	440.8	440.3	439.2
10°	436.6	436.6	436.1	433.4	432.9
12.5°	428.2	427.7	425.6	421.9	420.9
15°	416.7	416.7	412.5	408.3	406.7
17.5°	404.1	403.6	398.3	394.1	392.0
20°	390.5	389.4	384.2	377.4	373.7
22.5°	375.3	375.3	369.0	360.1	356.4
25°	361.1	359.0	353.2	340.7	331.2
27.5°	344.9	341.7	335.4	317.6	306.6
30°	327.0	325.5	316.6	293.5	285.1
32.5°	310.3	307.7	298.2	274.1	267.3
35°	293.0	290.9	276.7	255.8	249.5
37.5°	275.7	273.1	255.2	238.5	230.6
40°	258.4	255.2	235.8	220.6	212.3
42.5°	242.1	237.9	219.1	202.8	193.4
45°	224.8	220.1	201.3	184.5	177.1
47.5°	207.5	203.4	186.1	168.8	160.4
50°	189.2	185.5	169.8	152.5	143.6
52.5°	174.0	168.2	153.0	135.7	128.4
55°	156.2	151.5	137.3	121.1	114.8
57.5°	139.9	135.2	122.1	106.9	101.7
60°	124.7	117.9	106.9	93.8	89.6
62.5°	108.0	102.7	93.3	82.3	87.5
65°	92.8	87.5	79.1	80.7	67.1
67.5°	76.0	73.4	66.0	58.7	56.6
70°	61.8	58.7	56.1	48.2	46.1
72.5°	49.3	46.1	42.5	38.3	36.7
75°	37.2	34.6	32.5	30.9	34.1
77.5°	25.7	24.6	23.1	21.5	21.0
80°	16.8	16.2	15.7	15.2	14.7
82.5°	10.0	10.0	10.0	10.0	10.0
85°	5.2	5.8	6.3	6.8	7.3
87.5°	3.1	3.1	3.7	4.2	4.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)