

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: P560080

Luminaire Tested: FSR-12-2-LD4-1STD-40-UNV-82-84-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560080
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-LD4-1STD-40-UNV-82-84-EDD-90
Description: 1X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1204.0 lumens
Efficiency: N/A
Efficacy: 72.5 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

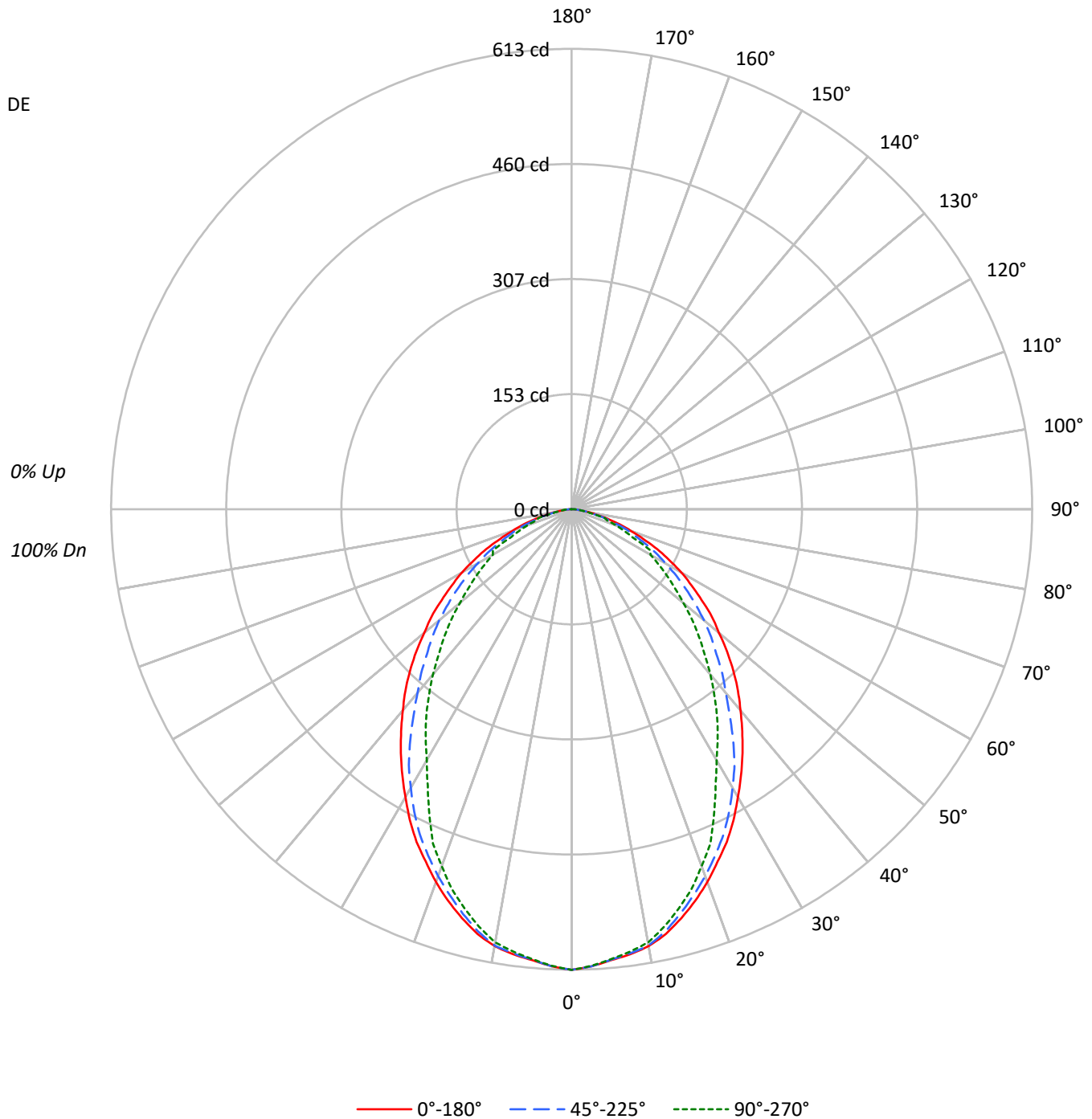
Input Watts (W): 16.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	3301	3301	3301
5°	3256	3252	3248
10°	3228	3224	3200
15°	3141	3109	3066
20°	3025	2977	2895
25°	2901	2838	2661
30°	2749	2661	2397
35°	2604	2460	2217
40°	2455	2242	2018
45°	2315	2073	1824
50°	2143	1923	1627
55°	1983	1743	1457
60°	1816	1556	1305
65°	1598	1364	1156
70°	1317	1194	982
75°	1046	915	959
80°	704	660	617
85°	438	525	611

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2315 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	57.1	4.7
10°-20°	156.7	13.0
20°-30°	216.9	18.0
30°-40°	231.3	19.2
40°-50°	211.0	17.5
50°-60°	165.3	13.7
60°-70°	107.7	8.9
70°-80°	47.7	4.0
80°-90°	10.3	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°	430.7	35.8
0°-40°	662.0	55.0
0°-60°	1038.3	86.2
0°-90°	1204.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1204.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	613	613	613	613	613	
5°	603	602	602	601	601	57
15°	564	564	558	552	550	158
25°	488	486	478	461	448	224
35°	396	394	374	346	338	248
45°	304	298	272	250	240	234
55°	211	205	186	164	155	190
65°	126	118	107	109	91	124
75°	50	47	44	42	46	54
85°	7	8	8	9	10	10
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	613.3	613.3	613.3	613.3	613.3
2.5°	609.0	609.0	609.0	608.3	608.3
5°	602.7	602.0	602.0	601.2	601.2
7.5°	597.7	597.0	596.3	595.6	594.2
10°	590.6	590.6	589.9	586.4	585.6
12.5°	579.3	578.6	575.7	570.8	569.3
15°	563.7	563.7	558.0	552.3	550.2
17.5°	546.7	545.9	538.9	533.2	530.3
20°	528.2	526.8	519.7	510.5	505.5
22.5°	507.7	507.7	499.1	487.1	482.1
25°	488.5	485.7	477.9	460.9	448.1
27.5°	466.5	462.3	453.8	429.7	414.8
30°	442.4	440.3	428.2	397.1	385.7
32.5°	419.7	416.2	403.4	370.8	361.6
35°	396.3	393.5	374.4	346.0	337.5
37.5°	372.9	369.4	345.3	322.6	312.0
40°	349.5	345.3	319.1	298.5	287.2
42.5°	327.6	321.9	296.4	274.4	261.6
45°	304.2	297.8	272.3	249.6	239.6
47.5°	280.8	275.1	251.7	228.3	217.0
50°	256.0	251.0	229.7	206.3	194.3
52.5°	235.4	227.6	207.0	183.6	173.7
55°	211.3	204.9	185.8	163.8	155.3
57.5°	189.3	182.9	165.2	144.6	137.5
60°	168.7	159.5	144.6	126.9	121.2
62.5°	146.1	139.0	126.2	111.3	118.4
65°	125.5	118.4	107.1	109.2	90.8
67.5°	102.8	99.3	89.3	79.4	76.6
70°	83.7	79.4	75.9	65.2	62.4
72.5°	66.6	62.4	57.4	51.8	49.6
75°	50.3	46.8	44.0	41.8	46.1
77.5°	34.7	33.3	31.2	29.1	28.4
80°	22.7	22.0	21.3	20.6	19.9
82.5°	13.5	13.5	13.5	13.5	13.5
85°	7.1	7.8	8.5	9.2	9.9
87.5°	4.3	4.3	5.0	5.7	6.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)