

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: P560066

Luminaire Tested: FSR-12-2-LD4-1STD-40-UNV-81-85-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560066
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-81-85-EDD-90
Description: 1X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1205.0 lumens
Efficiency: N/A
Efficacy: 72.6 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

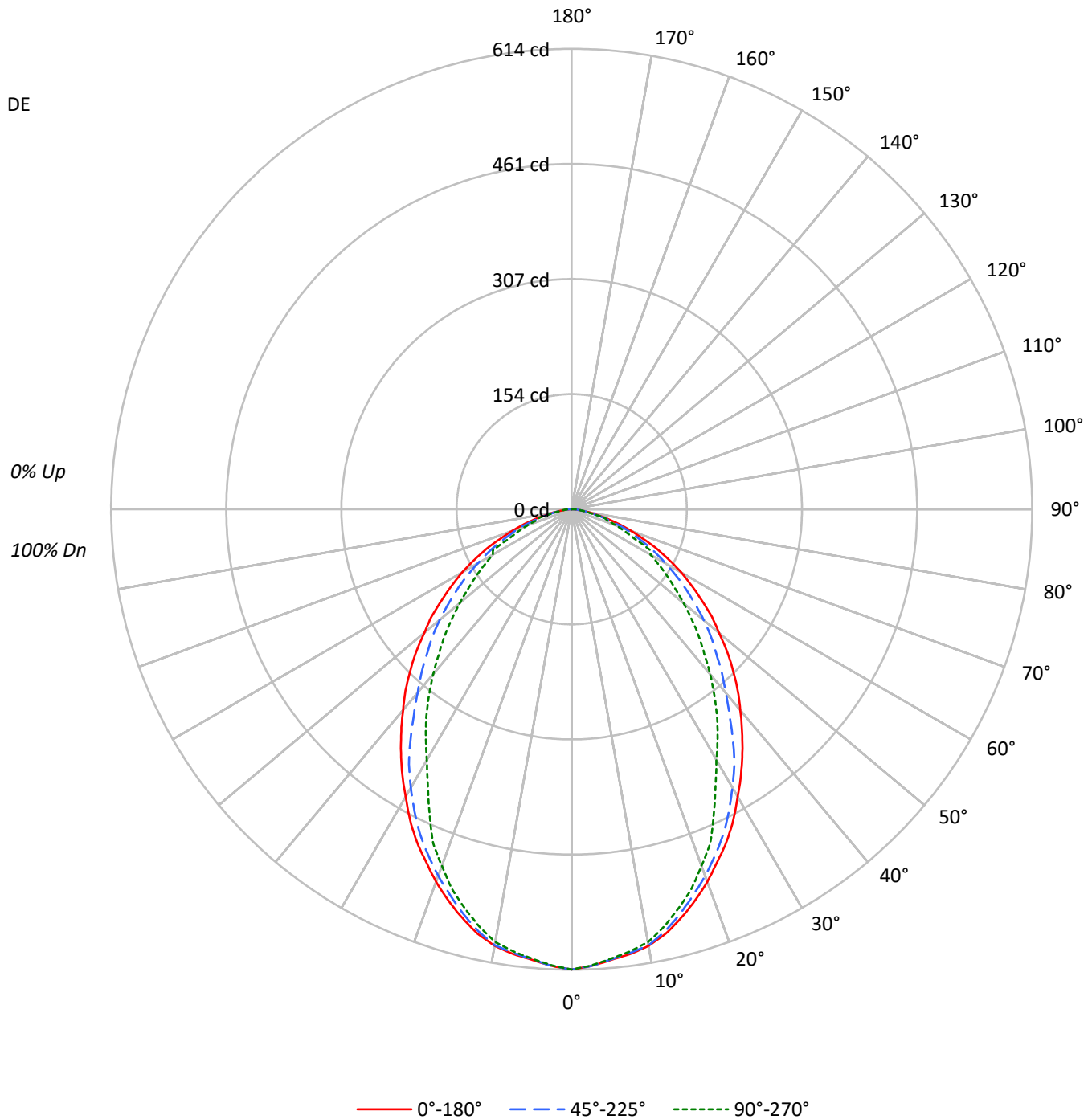
Input Watts (W): 16.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	3303	3303	3303
5°	3259	3255	3251
10°	3230	3227	3203
15°	3143	3112	3068
20°	3028	2979	2898
25°	2903	2840	2663
30°	2752	2664	2399
35°	2606	2462	2219
40°	2458	2243	2019
45°	2317	2074	1825
50°	2145	1925	1628
55°	1985	1744	1458
60°	1818	1559	1306
65°	1599	1365	1156
70°	1317	1194	982
75°	1048	915	959
80°	704	660	617
85°	438	525	611

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2317 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	57.1	4.7
10°-20°	156.8	13.0
20°-30°	217.1	18.0
30°-40°	231.5	19.2
40°-50°	211.2	17.5
50°-60°	165.4	13.7
60°-70°	107.8	8.9
70°-80°	47.8	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°	431.0	35.8
0°-40°	662.5	55.0
0°-60°	1039.1	86.2
0°-90°	1205.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1205.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	614	614	614	614	614	
5°	603	602	602	602	602	57
15°	564	564	558	553	551	159
25°	489	486	478	461	448	224
35°	397	394	375	346	338	248
45°	304	298	272	250	240	234
55°	212	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°	613.8	613.8	613.8	613.8	613.8
2.5°	609.6	609.6	609.6	608.8	608.8
5°	603.2	602.5	602.5	601.7	601.7
7.5°	598.2	597.5	596.8	596.1	594.7
10°	591.1	591.1	590.4	586.8	586.1
12.5°	579.7	579.0	576.2	571.2	569.8
15°	564.1	564.1	558.5	552.8	550.7
17.5°	547.1	546.4	539.3	533.6	530.8
20°	528.7	527.2	520.1	510.9	506.0
22.5°	508.1	508.1	499.6	487.5	482.5
25°	488.9	486.1	478.3	461.2	448.5
27.5°	466.9	462.7	454.1	430.0	415.1
30°	442.8	440.7	428.6	397.4	386.0
32.5°	420.1	416.5	403.8	371.1	361.9
35°	396.7	393.8	374.7	346.3	337.8
37.5°	373.3	369.7	345.6	322.9	312.2
40°	349.8	345.6	319.3	298.7	287.4
42.5°	327.8	322.2	296.6	274.6	261.8
45°	304.4	298.0	272.5	249.8	239.8
47.5°	281.0	275.3	251.9	228.5	217.1
50°	256.2	251.2	229.9	206.5	194.4
52.5°	235.6	227.8	207.2	183.8	173.9
55°	211.5	205.1	185.9	163.9	155.4
57.5°	189.5	183.1	165.3	144.8	137.7
60°	168.9	159.7	144.8	127.0	121.3
62.5°	146.2	139.1	126.3	111.4	118.5
65°	125.6	118.5	107.2	109.3	90.8
67.5°	102.9	99.3	89.4	79.5	76.6
70°	83.7	79.5	75.9	65.3	62.4
72.5°	66.7	62.4	57.5	51.8	49.7
75°	50.4	46.8	44.0	41.9	46.1
77.5°	34.8	33.4	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)