

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: P559494

Luminaire Tested: FSR-12-1-LD4-2STD-40-UNV-81-87-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559494
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-81-87-EDD-90
Description: 1X1 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1190.0 lumens
Efficiency: N/A
Efficacy: 71.7 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

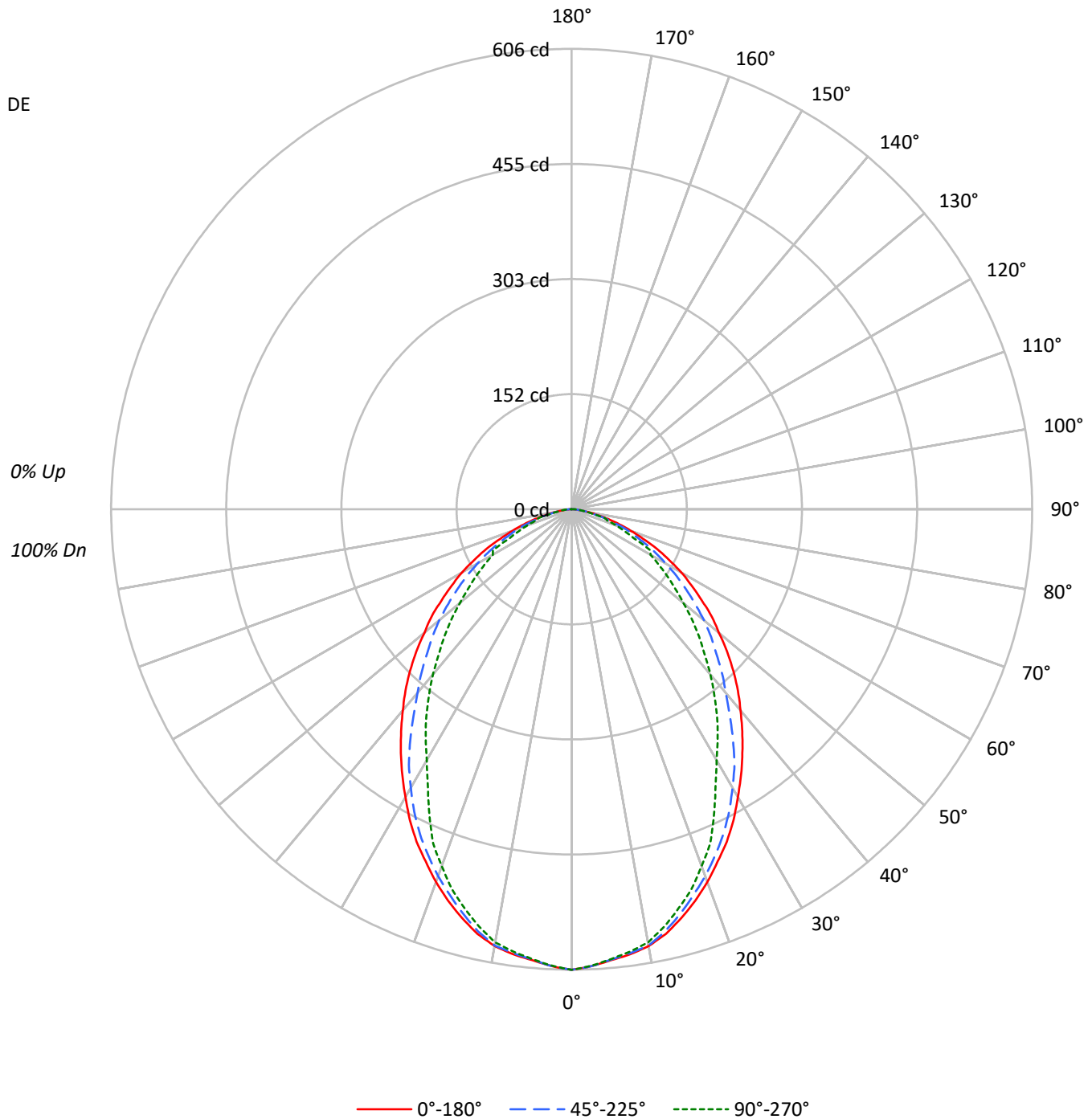
Input Watts (W): 16.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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																												
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°	6525	6525	6525
5°	6437	6429	6421
10°	6380	6372	6326
15°	6208	6146	6060
20°	5981	5884	5724
25°	5734	5609	5260
30°	5435	5261	4738
35°	5147	4862	4384
40°	4855	4430	3988
45°	4576	4096	3606
50°	4237	3803	3215
55°	3918	3445	2881
60°	3591	3078	2579
65°	3158	2695	2285
70°	2603	2360	1942
75°	2071	1805	1896
80°	1389	1302	1215
85°	865	1037	1210

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4576 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	56.4	4.7
10°-20°	154.9	13.0
20°-30°	214.4	18.0
30°-40°	228.6	19.2
40°-50°	208.6	17.5
50°-60°	163.4	13.7
60°-70°	106.5	8.9
70°-80°	47.2	4.0
80°-90°	10.1	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°	425.7	35.8
0°-40°	654.3	55.0
0°-60°	1026.2	86.2
0°-90°	1190.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1190.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	606	606	606	606	606	
5°	596	595	595	594	594	57
15°	557	557	552	546	544	157
25°	483	480	472	456	443	222
35°	392	389	370	342	334	245
45°	301	294	269	247	237	232
55°	209	202	184	162	154	187
65°	124	117	106	108	90	122
75°	50	46	43	41	46	53
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°	606.2	606.2	606.2	606.2	606.2
2.5°	602.0	602.0	602.0	601.3	601.3
5°	595.7	595.0	595.0	594.3	594.3
7.5°	590.8	590.1	589.4	588.7	587.2
10°	583.7	583.7	583.0	579.5	578.8
12.5°	572.5	571.8	569.0	564.1	562.7
15°	557.1	557.1	551.5	545.9	543.8
17.5°	540.3	539.6	532.6	527.0	524.2
20°	522.1	520.7	513.7	504.6	499.7
22.5°	501.8	501.8	493.3	481.4	476.5
25°	482.8	480.0	472.3	455.5	442.9
27.5°	461.1	456.9	448.5	424.7	410.0
30°	437.3	435.2	423.3	392.4	381.2
32.5°	414.9	411.4	398.7	366.5	357.4
35°	391.7	388.9	370.0	342.0	333.6
37.5°	368.6	365.1	341.3	318.9	308.3
40°	345.5	341.3	315.3	295.0	283.8
42.5°	323.8	318.2	292.9	271.2	258.6
45°	300.6	294.3	269.1	246.7	236.9
47.5°	277.5	271.9	248.8	225.6	214.4
50°	253.0	248.1	227.1	203.9	192.0
52.5°	232.7	224.9	204.6	181.5	171.7
55°	208.8	202.5	183.6	161.9	153.5
57.5°	187.1	180.8	163.3	143.0	136.0
60°	166.8	157.7	143.0	125.4	119.8
62.5°	144.4	137.4	124.7	110.0	117.0
65°	124.0	117.0	105.8	107.9	89.7
67.5°	101.6	98.1	88.3	78.5	75.7
70°	82.7	78.5	75.0	64.5	61.7
72.5°	65.9	61.7	56.8	51.2	49.1
75°	49.8	46.3	43.4	41.3	45.6
77.5°	34.3	32.9	30.8	28.7	28.0
80°	22.4	21.7	21.0	20.3	19.6
82.5°	13.3	13.3	13.3	13.3	13.3
85°	7.0	7.7	8.4	9.1	9.8
87.5°	4.2	4.2	4.9	5.6	6.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)