

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: P559493

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

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559493
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-81-86-EDD
Description: 1X1 FSR TROFFER WITH .156 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: 1463.0 lumens
Efficiency: N/A
Efficacy: 88.1 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

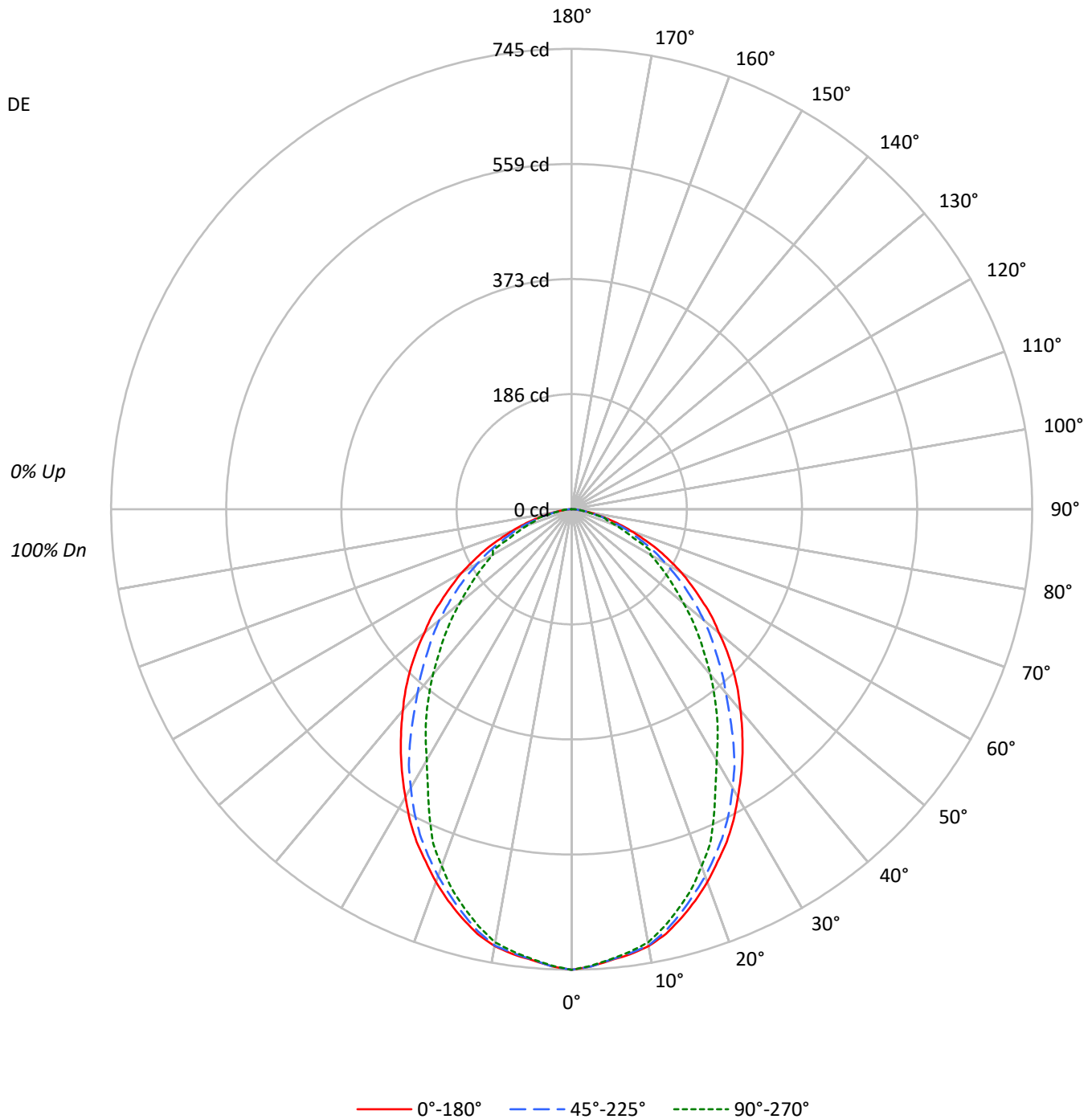
Input Watts (W): 16.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	8021	8021	8021
5°	7913	7903	7894
10°	7844	7835	7778
15°	7632	7555	7451
20°	7352	7234	7037
25°	7050	6897	6467
30°	6682	6468	5826
35°	6328	5978	5389
40°	5968	5448	4902
45°	5626	5036	4433
50°	5208	4674	3954
55°	4817	4236	3541
60°	4413	3785	3171
65°	3884	3314	2809
70°	3201	2902	2386
75°	2545	2221	2329
80°	1711	1599	1494
85°	1062	1272	1494

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5626 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	69.4	4.7
10°-20°	190.4	13.0
20°-30°	263.6	18.0
30°-40°	281.0	19.2
40°-50°	256.4	17.5
50°-60°	200.9	13.7
60°-70°	130.9	8.9
70°-80°	58.0	4.0
80°-90°	12.5	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°	523.3	35.8
0°-40°	804.4	55.0
0°-60°	1261.6	86.2
0°-90°	1463.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1463.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	745	745	745	745	745	
5°	732	731	731	731	731	70
15°	685	685	678	671	669	193
25°	594	590	581	560	544	273
35°	482	478	455	420	410	301
45°	370	362	331	303	291	285
55°	257	249	226	199	189	230
65°	152	144	130	133	110	150
75°	61	57	53	51	56	66
85°	9	10	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°	745.2	745.2	745.2	745.2	745.2
2.5°	740.1	740.1	740.1	739.2	739.2
5°	732.3	731.4	731.4	730.6	730.6
7.5°	726.3	725.4	724.6	723.7	722.0
10°	717.7	717.7	716.8	712.5	711.6
12.5°	703.9	703.0	699.6	693.5	691.8
15°	684.9	684.9	678.0	671.1	668.6
17.5°	664.2	663.4	654.8	647.9	644.4
20°	641.8	640.1	631.5	620.3	614.3
22.5°	616.9	616.9	606.5	591.9	585.8
25°	593.6	590.2	580.7	560.0	544.5
27.5°	566.9	561.7	551.4	522.1	504.0
30°	537.6	535.0	520.4	482.5	468.7
32.5°	510.0	505.7	490.2	450.6	439.4
35°	481.6	478.2	454.9	420.4	410.1
37.5°	453.2	448.9	419.6	392.0	379.1
40°	424.7	419.6	387.7	362.7	348.9
42.5°	398.0	391.1	360.1	333.4	317.9
45°	369.6	361.8	330.8	303.3	291.2
47.5°	341.2	334.3	305.8	277.4	263.6
50°	311.0	305.0	279.1	250.7	236.1
52.5°	286.0	276.6	251.6	223.1	211.1
55°	256.7	249.0	225.7	199.0	188.7
57.5°	230.0	222.3	200.7	175.8	167.1
60°	205.0	193.8	175.8	154.2	147.3
62.5°	177.5	168.9	153.4	135.3	143.9
65°	152.5	143.9	130.1	132.7	110.3
67.5°	124.9	120.6	108.6	96.5	93.0
70°	101.7	96.5	92.2	79.3	75.8
72.5°	81.0	75.8	69.8	62.9	60.3
75°	61.2	56.9	53.4	50.8	56.0
77.5°	42.2	40.5	37.9	35.3	34.5
80°	27.6	26.7	25.8	25.0	24.1
82.5°	16.4	16.4	16.4	16.4	16.4
85°	8.6	9.5	10.3	11.2	12.1
87.5°	5.2	5.2	6.0	6.9	7.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)