

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: P559496

Luminaire Tested: FSR-12-1-LD4-2STD-40-UNV-81-88-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559496
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-81-88-EDD-90
Description: 1X1 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1071.0 lumens
Efficiency: N/A
Efficacy: 64.5 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

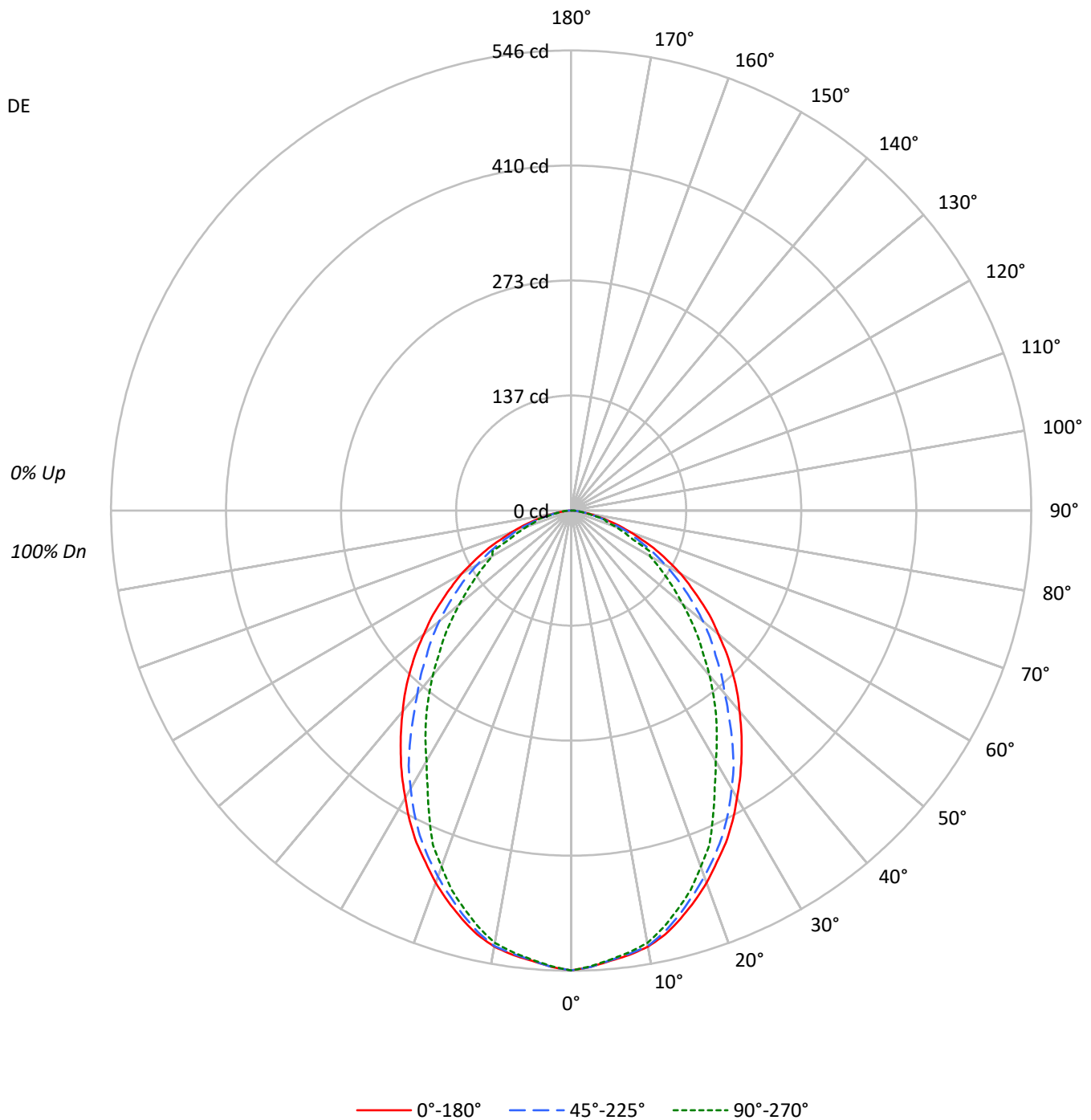
Input Watts (W): 16.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	5873	5873	5873
5°	5793	5786	5779
10°	5743	5735	5695
15°	5587	5532	5454
20°	5383	5296	5151
25°	5162	5049	4734
30°	4892	4734	4264
35°	4633	4376	3945
40°	4369	3988	3589
45°	4119	3687	3245
50°	3813	3421	2894
55°	3526	3100	2592
60°	3231	2771	2321
65°	2842	2425	2055
70°	2341	2124	1747
75°	1863	1626	1705
80°	1252	1172	1097
85°	778	939	1087

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4119 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	50.8	4.7
10°-20°	139.4	13.0
20°-30°	193.0	18.0
30°-40°	205.7	19.2
40°-50°	187.7	17.5
50°-60°	147.1	13.7
60°-70°	95.8	8.9
70°-80°	42.5	4.0
80°-90°	9.1	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°	383.1	35.8
0°-40°	588.8	55.0
0°-60°	923.6	86.2
0°-90°	1071.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1071.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	546	546	546	546	546	
5°	536	536	536	535	535	51
15°	501	501	496	491	489	141
25°	435	432	425	410	399	200
35°	353	350	333	308	300	220
45°	271	265	242	222	213	208
55°	188	182	165	146	138	169
65°	112	105	95	97	81	110
75°	45	42	39	37	41	48
85°	6	7	8	8	9	9
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	545.6	545.6	545.6	545.6	545.6
2.5°	541.8	541.8	541.8	541.1	541.1
5°	536.1	535.5	535.5	534.8	534.8
7.5°	531.7	531.0	530.4	529.8	528.5
10°	525.4	525.4	524.7	521.6	521.0
12.5°	515.3	514.6	512.1	507.7	506.4
15°	501.4	501.4	496.4	491.3	489.4
17.5°	486.3	485.6	479.3	474.3	471.8
20°	469.9	468.6	462.3	454.1	449.7
22.5°	451.6	451.6	444.0	433.3	428.9
25°	434.6	432.0	425.1	410.0	398.6
27.5°	415.0	411.2	403.6	382.2	369.0
30°	393.6	391.7	380.9	353.2	343.1
32.5°	373.4	370.2	358.9	329.9	321.7
35°	352.6	350.0	333.0	307.8	300.2
37.5°	331.7	328.6	307.1	287.0	277.5
40°	310.9	307.1	283.8	265.5	255.4
42.5°	291.4	286.3	263.6	244.1	232.7
45°	270.6	264.9	242.2	222.0	213.2
47.5°	249.8	244.7	223.9	203.1	193.0
50°	227.7	223.3	204.3	183.5	172.8
52.5°	209.4	202.5	184.2	163.4	154.5
55°	187.9	182.3	165.2	145.7	138.1
57.5°	168.4	162.7	147.0	128.7	122.4
60°	150.1	141.9	128.7	112.9	107.8
62.5°	129.9	123.6	112.3	99.0	105.3
65°	111.6	105.3	95.2	97.1	80.7
67.5°	91.5	88.3	79.5	70.6	68.1
70°	74.4	70.6	67.5	58.0	55.5
72.5°	59.3	55.5	51.1	46.0	44.1
75°	44.8	41.6	39.1	37.2	41.0
77.5°	30.9	29.6	27.8	25.9	25.2
80°	20.2	19.6	18.9	18.3	17.7
82.5°	12.0	12.0	12.0	12.0	12.0
85°	6.3	6.9	7.6	8.2	8.8
87.5°	3.8	3.8	4.4	5.0	5.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)