

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: P560648

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

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560648
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-LD4-2STD-40-UNV-81-88-EDD-90
Description: 1X2 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: 2077.0 lumens
Efficiency: N/A
Efficacy: 62.4 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

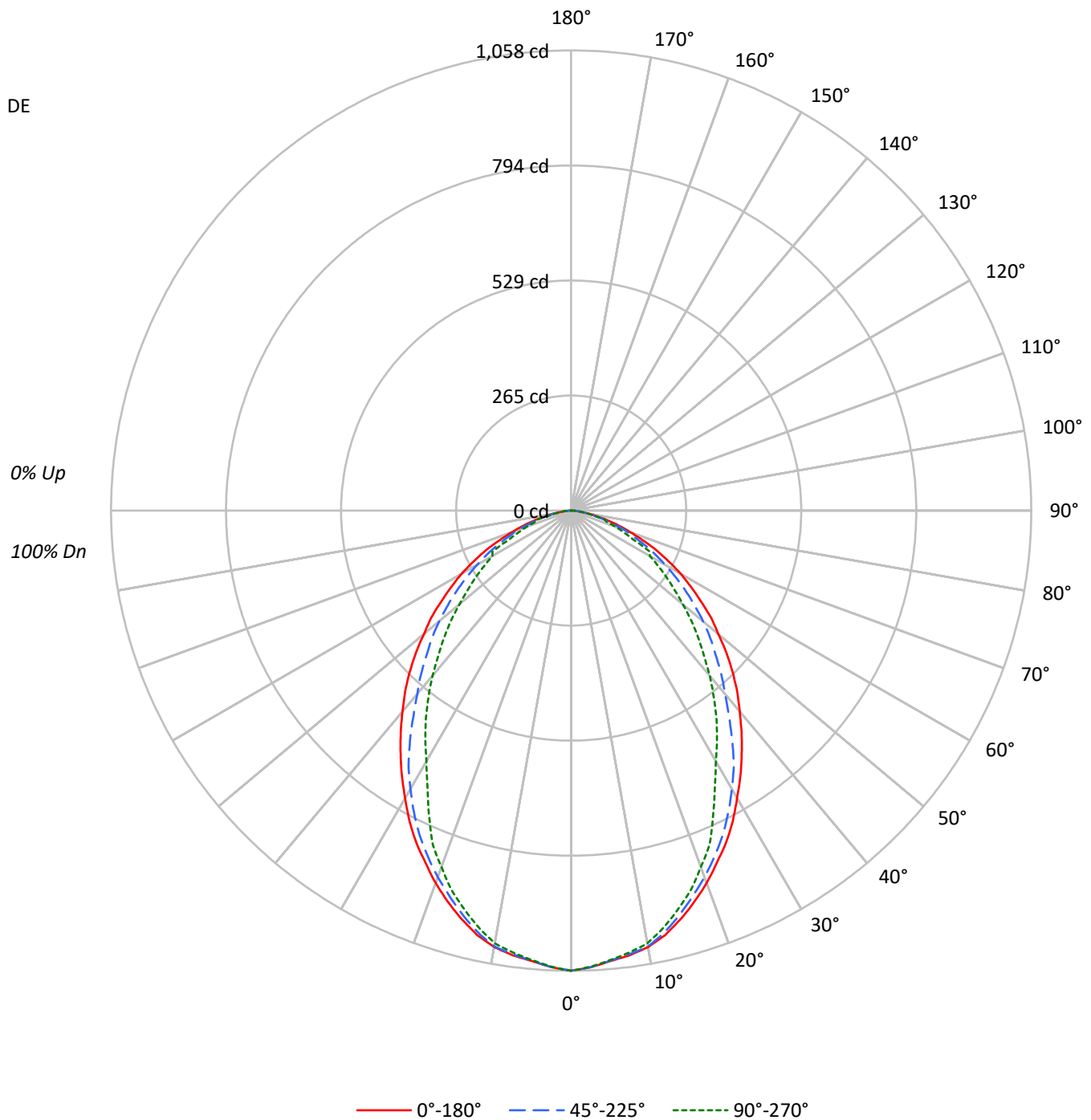
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	5694	5694	5694
5°	5616	5610	5603
10°	5568	5561	5521
15°	5418	5363	5288
20°	5219	5135	4995
25°	5004	4896	4590
30°	4743	4591	4135
35°	4492	4243	3825
40°	4236	3867	3481
45°	3994	3575	3146
50°	3697	3318	2806
55°	3420	3007	2514
60°	3133	2686	2252
65°	2757	2352	1994
70°	2271	2060	1693
75°	1805	1576	1653
80°	1212	1137	1060
85°	753	908	1056

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3994 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	98.5	4.7
10°-20°	270.3	13.0
20°-30°	374.2	18.0
30°-40°	399.0	19.2
40°-50°	364.0	17.5
50°-60°	285.2	13.7
60°-70°	185.9	8.9
70°-80°	82.3	4.0
80°-90°	17.7	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°	743.0	35.8
0°-40°	1142.0	55.0
0°-60°	1791.1	86.2
0°-90°	2077.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2077.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1058	1058	1058	1058	1058	
5°	1040	1038	1038	1037	1037	99
15°	972	972	963	953	949	273
25°	843	838	824	795	773	387
35°	684	679	646	597	582	427
45°	525	514	470	430	413	404
55°	364	354	320	282	268	327
65°	216	204	185	188	157	213
75°	87	81	76	72	80	93
85°	12	14	15	16	17	17
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1058.0	1058.0	1058.0	1058.0	1058.0
2.5°	1050.7	1050.7	1050.7	1049.4	1049.4
5°	1039.6	1038.4	1038.4	1037.2	1037.2
7.5°	1031.1	1029.9	1028.6	1027.4	1025.0
10°	1018.9	1018.9	1017.6	1011.5	1010.3
12.5°	999.3	998.1	993.2	984.6	982.2
15°	972.4	972.4	962.6	952.8	949.1
17.5°	943.0	941.8	929.6	919.8	914.9
20°	911.2	908.8	896.5	880.6	872.1
22.5°	875.8	875.8	861.1	840.3	831.7
25°	842.7	837.8	824.4	795.0	773.0
27.5°	804.8	797.5	782.8	741.2	715.5
30°	763.2	759.6	738.8	684.9	665.4
32.5°	724.1	718.0	696.0	639.7	623.8
35°	683.7	678.8	645.8	596.9	582.2
37.5°	643.4	637.2	595.7	556.5	538.2
40°	603.0	595.7	550.4	514.9	495.4
42.5°	565.1	555.3	511.3	473.3	451.3
45°	524.7	513.7	469.7	430.5	413.4
47.5°	484.4	474.6	434.2	393.8	374.3
50°	441.5	433.0	396.3	355.9	335.1
52.5°	406.1	392.6	357.2	316.8	299.7
55°	364.5	353.5	320.5	282.5	267.9
57.5°	326.6	315.6	285.0	249.5	237.3
60°	291.1	275.2	249.5	218.9	209.2
62.5°	252.0	239.7	217.7	192.0	204.3
65°	216.5	204.3	184.7	188.4	156.6
67.5°	177.4	171.2	154.1	137.0	132.1
70°	144.3	137.0	130.9	112.5	107.6
72.5°	115.0	107.6	99.1	89.3	85.6
75°	86.8	80.7	75.8	72.2	79.5
77.5°	59.9	57.5	53.8	50.1	48.9
80°	39.1	37.9	36.7	35.5	34.2
82.5°	23.2	23.2	23.2	23.2	23.2
85°	12.2	13.5	14.7	15.9	17.1
87.5°	7.3	7.3	8.6	9.8	11.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)