

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: P559530

Luminaire Tested: FSR-12-1-LD4-2STD-40-UNV-93-94-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559530
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-93-94-EDD-90
Description: 1X1 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1341.0 lumens
Efficiency: N/A
Efficacy: 80.8 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

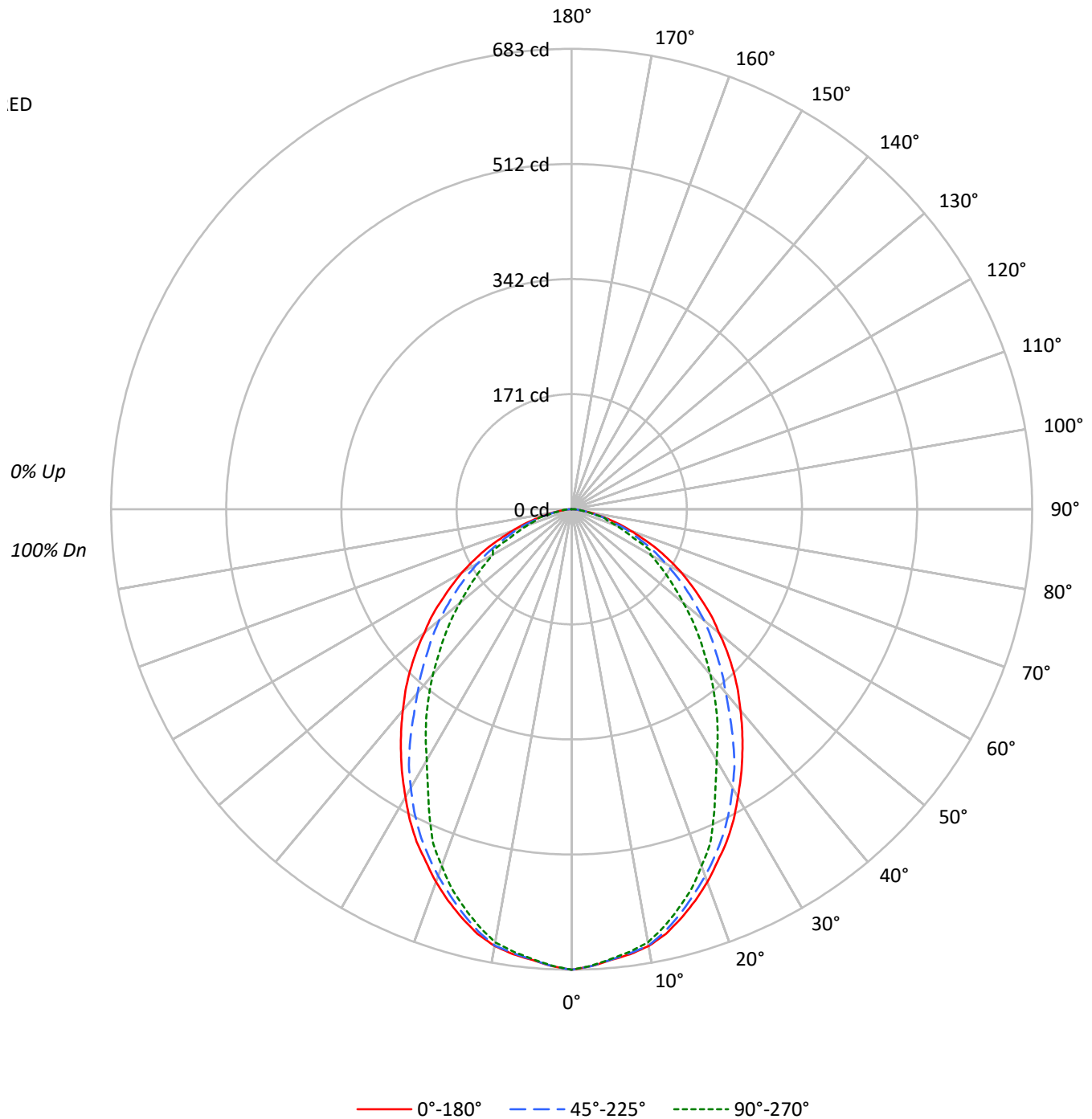
Input Watts (W): 16.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	7353	7353	7353
5°	7252	7245	7236
10°	7190	7181	7130
15°	6996	6926	6829
20°	6739	6630	6450
25°	6462	6322	5928
30°	6125	5929	5340
35°	5800	5480	4939
40°	5470	4994	4494
45°	5157	4615	4063
50°	4774	4285	3624
55°	4416	3883	3245
60°	4045	3468	2906
65°	3561	3036	2575
70°	2933	2659	2187
75°	2333	2038	2133
80°	1568	1469	1370
85°	976	1173	1371

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5157 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	63.6	4.7
10°-20°	174.5	13.0
20°-30°	241.6	18.0
30°-40°	257.6	19.2
40°-50°	235.0	17.5
50°-60°	184.1	13.7
60°-70°	120.0	8.9
70°-80°	53.2	4.0
80°-90°	11.4	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°	479.7	35.8
0°-40°	737.3	55.0
0°-60°	1156.4	86.2
0°-90°	1341.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1341.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	683	683	683	683	683	
5°	671	670	670	670	670	64
15°	628	628	622	615	613	176
25°	544	541	532	513	499	250
35°	441	438	417	385	376	276
45°	339	332	303	278	267	261
55°	235	228	207	182	173	211
65°	140	132	119	122	101	138
75°	56	52	49	47	51	60
85°	8	9	10	10	11	11
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	683.1	683.1	683.1	683.1	683.1
2.5°	678.3	678.3	678.3	677.6	677.6
5°	671.2	670.5	670.5	669.7	669.7
7.5°	665.7	664.9	664.1	663.3	661.8
10°	657.8	657.8	657.0	653.1	652.3
12.5°	645.2	644.4	641.2	635.7	634.1
15°	627.8	627.8	621.5	615.2	612.8
17.5°	608.9	608.1	600.2	593.9	590.7
20°	588.3	586.7	578.8	568.6	563.1
22.5°	565.4	565.4	555.9	542.5	537.0
25°	544.1	540.9	532.3	513.3	499.1
27.5°	519.6	514.9	505.4	478.6	462.0
30°	492.8	490.4	477.0	442.2	429.6
32.5°	467.5	463.6	449.3	413.0	402.7
35°	441.4	438.3	417.0	385.4	375.9
37.5°	415.4	411.4	384.6	359.3	347.5
40°	389.3	384.6	355.4	332.5	319.8
42.5°	364.8	358.5	330.1	305.6	291.4
45°	338.8	331.7	303.2	278.0	266.9
47.5°	312.7	306.4	280.3	254.3	241.6
50°	285.1	279.6	255.9	229.8	216.4
52.5°	262.2	253.5	230.6	204.5	193.5
55°	235.3	228.2	206.9	182.4	172.9
57.5°	210.8	203.7	184.0	161.1	153.2
60°	187.9	177.7	161.1	141.4	135.0
62.5°	162.7	154.8	140.6	124.0	131.9
65°	139.8	131.9	119.2	121.6	101.1
67.5°	114.5	110.6	99.5	88.4	85.3
70°	93.2	88.4	84.5	72.7	69.5
72.5°	74.2	69.5	64.0	57.6	55.3
75°	56.1	52.1	49.0	46.6	51.3
77.5°	38.7	37.1	34.7	32.4	31.6
80°	25.3	24.5	23.7	22.9	22.1
82.5°	15.0	15.0	15.0	15.0	15.0
85°	7.9	8.7	9.5	10.3	11.1
87.5°	4.7	4.7	5.5	6.3	7.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)