

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: P559533

Luminaire Tested: FSR-12-1-LD4-2STD-40-UNV-93-96-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559533
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-93-96-EDD
Description: 1X1 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1579.0 lumens
Efficiency: N/A
Efficacy: 95.1 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

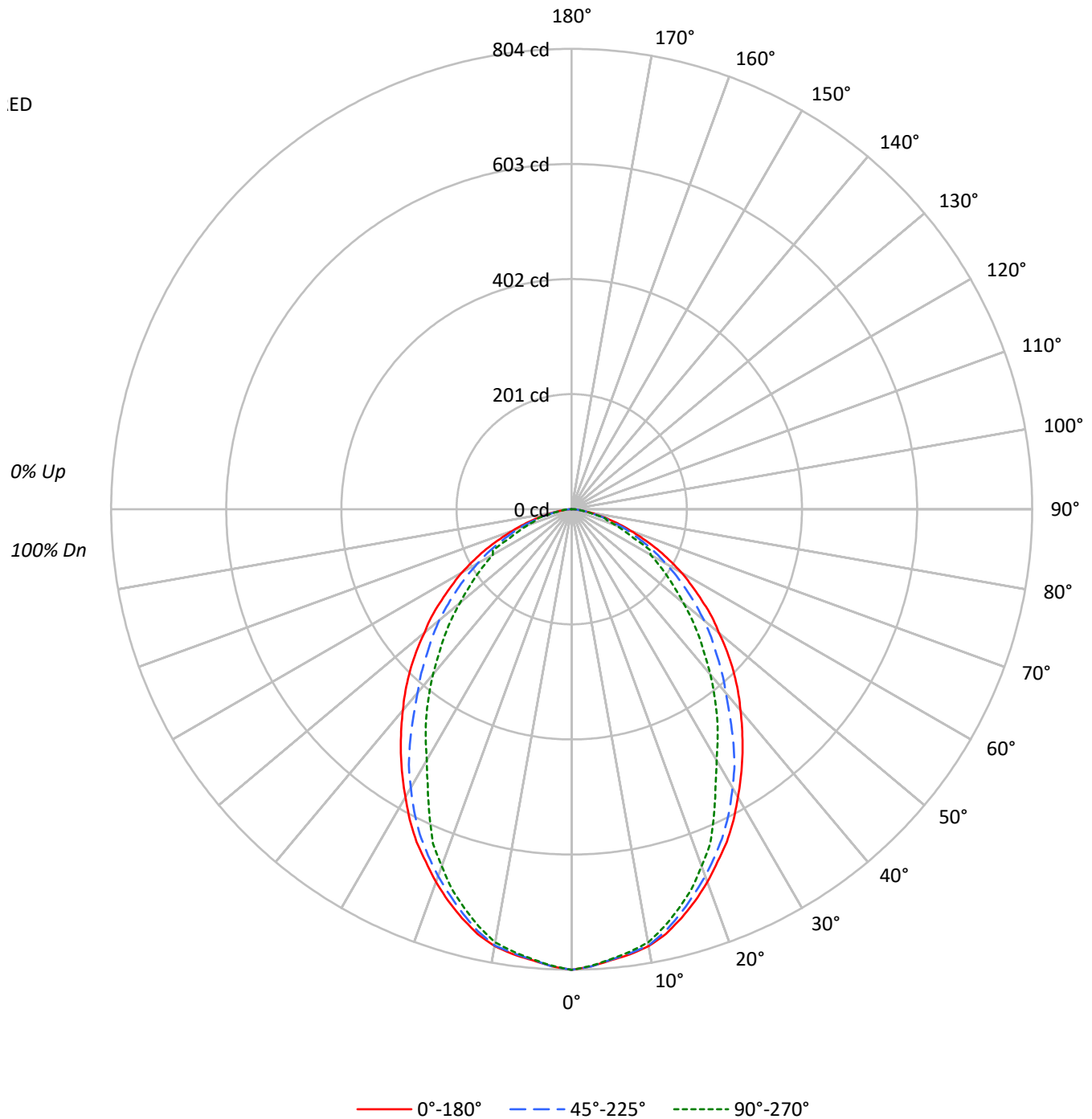
Input Watts (W): 16.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	8657	8657	8657
5°	8540	8529	8520
10°	8466	8455	8395
15°	8237	8155	8041
20°	7935	7808	7594
25°	7609	7443	6980
30°	7211	6980	6287
35°	6830	6452	5816
40°	6441	5879	5292
45°	6072	5436	4784
50°	5622	5045	4267
55°	5200	4571	3821
60°	4764	4084	3423
65°	4192	3576	3031
70°	3452	3131	2574
75°	2745	2400	2512
80°	1847	1729	1612
85°	1149	1383	1606

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6072 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	74.9	4.7
10°-20°	205.5	13.0
20°-30°	284.5	18.0
30°-40°	303.3	19.2
40°-50°	276.7	17.5
50°-60°	216.8	13.7
60°-70°	141.3	8.9
70°-80°	62.6	4.0
80°-90°	13.5	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°	564.8	35.8
0°-40°	868.1	55.0
0°-60°	1361.7	86.2
0°-90°	1579.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1579.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	804	804	804	804	804	
5°	790	789	789	788	788	75
15°	739	739	732	724	722	208
25°	641	637	627	604	588	294
35°	520	516	491	454	443	325
45°	399	390	357	327	314	307
55°	277	269	244	215	204	249
65°	165	155	140	143	119	162
75°	66	61	58	55	60	71
85°	9	10	11	12	13	13
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	804.3	804.3	804.3	804.3	804.3
2.5°	798.7	798.7	798.7	797.8	797.8
5°	790.4	789.4	789.4	788.5	788.5
7.5°	783.9	782.9	782.0	781.1	779.2
10°	774.6	774.6	773.6	769.0	768.1
12.5°	759.7	758.8	755.0	748.5	746.7
15°	739.2	739.2	731.8	724.4	721.6
17.5°	716.9	716.0	706.7	699.2	695.5
20°	692.7	690.9	681.6	669.5	663.0
22.5°	665.8	665.8	654.6	638.8	632.3
25°	640.7	636.9	626.7	604.4	587.7
27.5°	611.8	606.3	595.1	563.5	544.0
30°	580.2	577.4	561.6	520.7	505.8
32.5°	550.5	545.8	529.1	486.3	474.2
35°	519.8	516.1	491.0	453.8	442.6
37.5°	489.1	484.5	452.8	423.1	409.1
40°	458.4	452.8	418.4	391.5	376.6
42.5°	429.6	422.2	388.7	359.9	343.1
45°	398.9	390.5	357.1	327.3	314.3
47.5°	368.2	360.8	330.1	299.4	284.5
50°	335.7	329.2	301.3	270.6	254.8
52.5°	308.7	298.5	271.5	240.8	227.8
55°	277.1	268.7	243.6	214.8	203.6
57.5°	248.3	239.9	216.7	189.7	180.4
60°	221.3	209.2	189.7	166.4	159.0
62.5°	191.5	182.3	165.5	146.0	155.3
65°	164.6	155.3	140.4	143.2	119.0
67.5°	134.8	130.2	117.2	104.1	100.4
70°	109.7	104.1	99.5	85.5	81.8
72.5°	87.4	81.8	75.3	67.9	65.1
75°	66.0	61.4	57.7	54.9	60.4
77.5°	45.6	43.7	40.9	38.1	37.2
80°	29.8	28.8	27.9	27.0	26.0
82.5°	17.7	17.7	17.7	17.7	17.7
85°	9.3	10.2	11.2	12.1	13.0
87.5°	5.6	5.6	6.5	7.4	8.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)