

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: P560687

Luminaire Tested: FSR-12-2-LD4-2STD-40-UNV-93-97-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560687
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-93-97-EDD
Description: 1X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 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: 2951.0 lumens
Efficiency: N/A
Efficacy: 88.6 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

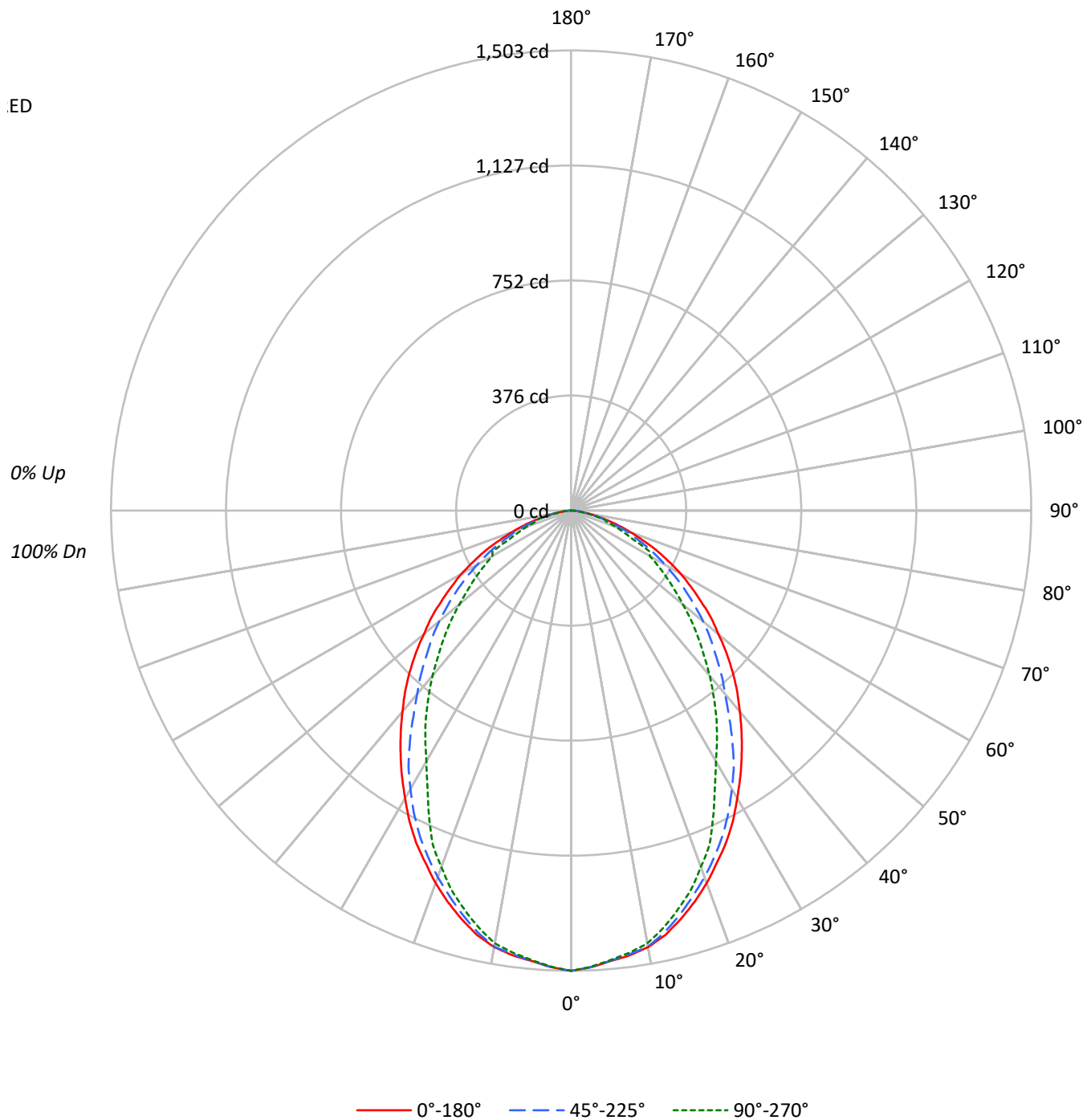
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20																		
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°	8090	8090	8090
5°	7980	7971	7962
10°	7911	7902	7844
15°	7698	7621	7514
20°	7415	7296	7097
25°	7110	6956	6522
30°	6739	6523	5875
35°	6382	6029	5435
40°	6019	5494	4945
45°	5674	5079	4471
50°	5252	4714	3987
55°	4860	4272	3571
60°	4452	3816	3199
65°	3917	3342	2832
70°	3227	2925	2406
75°	2566	2240	2350
80°	1723	1615	1509
85°	1074	1291	1501

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5674 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	139.9	4.7
10°-20°	384.0	13.0
20°-30°	531.7	18.0
30°-40°	566.9	19.2
40°-50°	517.2	17.5
50°-60°	405.2	13.7
60°-70°	264.1	8.9
70°-80°	117.0	4.0
80°-90°	25.1	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°	1055.6	35.8
0°-40°	1622.5	55.0
0°-60°	2544.8	86.2
0°-90°	2951.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2951.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1503	1503	1503	1503	1503	
5°	1477	1475	1475	1474	1474	140
15°	1382	1382	1368	1354	1348	388
25°	1197	1190	1171	1130	1098	550
35°	971	964	918	848	827	607
45°	746	730	667	612	587	574
55°	518	502	455	401	381	465
65°	308	290	262	268	222	303
75°	123	115	108	102	113	132
85°	17	19	21	23	24	24
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1503.2	1503.2	1503.2	1503.2	1503.2
2.5°	1492.8	1492.8	1492.8	1491.0	1491.0
5°	1477.1	1475.4	1475.4	1473.7	1473.7
7.5°	1465.0	1463.2	1461.5	1459.8	1456.3
10°	1447.6	1447.6	1445.9	1437.2	1435.4
12.5°	1419.8	1418.0	1411.1	1398.9	1395.5
15°	1381.6	1381.6	1367.7	1353.7	1348.5
17.5°	1339.8	1338.1	1320.7	1306.8	1299.9
20°	1294.7	1291.2	1273.8	1251.2	1239.1
22.5°	1244.3	1244.3	1223.4	1193.9	1181.7
25°	1197.3	1190.4	1171.3	1129.6	1098.3
27.5°	1143.5	1133.0	1112.2	1053.1	1016.6
30°	1084.4	1079.2	1049.6	973.2	945.4
32.5°	1028.8	1020.1	988.8	908.9	886.3
35°	971.4	964.5	917.6	848.0	827.2
37.5°	914.1	905.4	846.3	790.7	764.6
40°	856.7	846.3	782.0	731.6	703.8
42.5°	802.9	789.0	726.4	672.5	641.2
45°	745.5	729.9	667.3	611.7	587.4
47.5°	688.2	674.3	616.9	559.6	531.8
50°	627.3	615.2	563.0	505.7	476.2
52.5°	577.0	557.8	507.4	450.1	425.8
55°	517.9	502.2	455.3	401.4	380.6
57.5°	464.0	448.4	404.9	354.5	337.1
60°	413.6	391.0	354.5	311.1	297.2
62.5°	358.0	340.6	309.3	272.8	290.2
65°	307.6	290.2	262.4	267.6	222.4
67.5°	252.0	243.3	219.0	194.6	187.7
70°	205.1	194.6	185.9	159.9	152.9
72.5°	163.4	152.9	140.8	126.9	121.6
75°	123.4	114.7	107.7	102.5	113.0
77.5°	85.2	81.7	76.5	71.2	69.5
80°	55.6	53.9	52.1	50.4	48.7
82.5°	33.0	33.0	33.0	33.0	33.0
85°	17.4	19.1	20.9	22.6	24.3
87.5°	10.4	10.4	12.2	13.9	15.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)