

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: P590033

Luminaire Tested: FSR-24-2-LD4-1LO-50-UNV-93-88-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590033
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-1)
Test Lab: INNOVATION CENTER
Issue Date: 12/8/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-24-2-LD4-1LO-50-UNV-93-88-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1266.0 lumens
Efficiency: N/A
Efficacy: 108.2 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

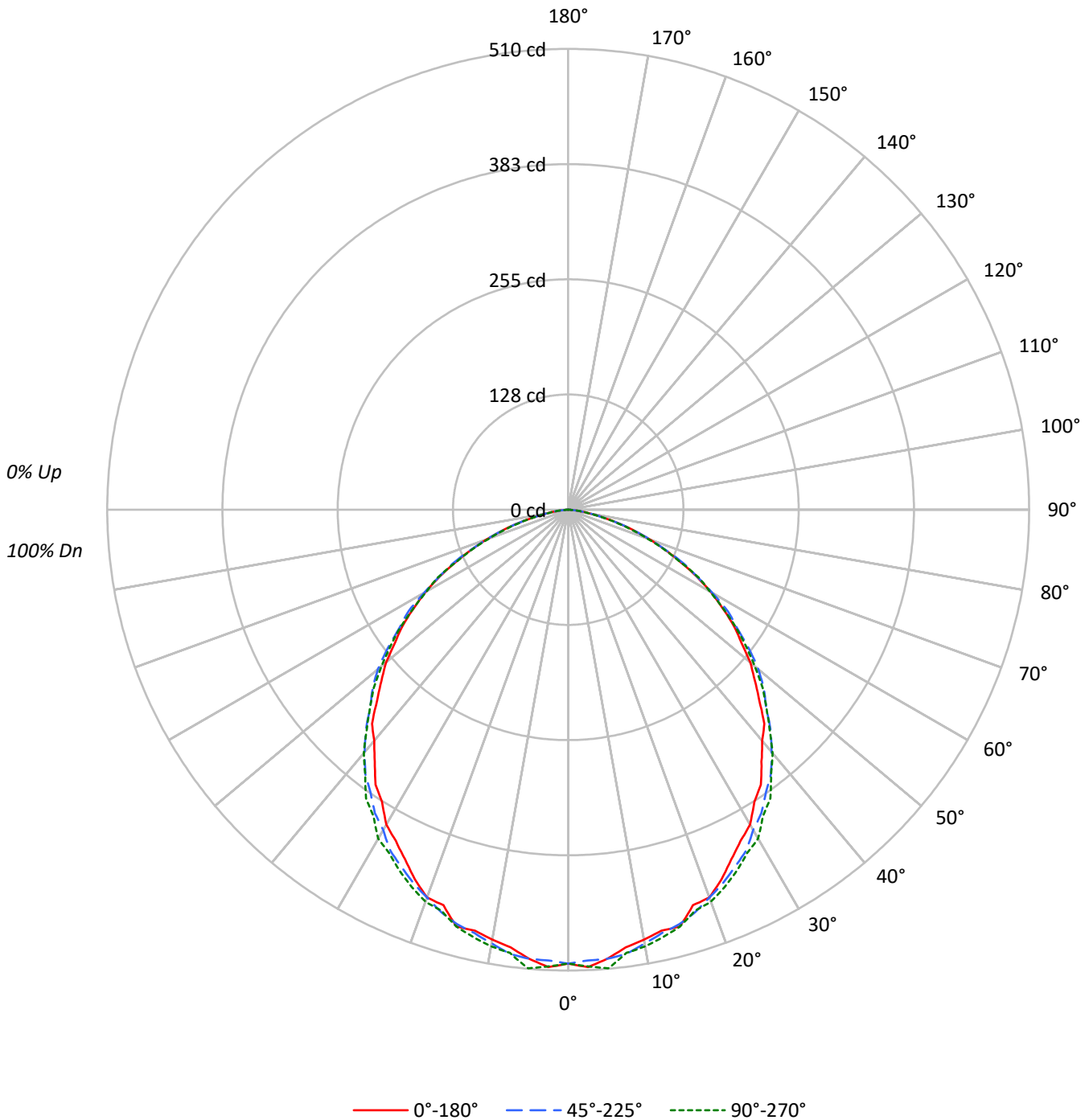
Input Watts (W): 11.7
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	105	101	98	107	103	100	96	99	96	93		95	93	90		91	90	88	86
2	100	93	86	81	98	91	85	80	87	82	78		84	80	76		81	78	75	73
3	92	82	74	68	89	80	73	67	77	71	66		75	69	65		72	68	64	62
4	84	73	64	58	82	71	64	58	69	62	57		67	61	56		65	59	55	53
5	78	65	57	50	76	64	56	50	62	55	49		60	54	49		58	53	48	46
6	72	59	50	44	70	58	50	44	56	49	43		54	48	43		53	47	43	41
7	67	53	45	39	65	53	45	39	51	44	39		50	43	38		48	42	38	36
8	62	49	41	35	61	48	40	35	47	40	34		46	39	34		44	39	34	32
9	58	45	37	31	57	44	37	31	43	36	31		42	36	31		41	35	31	29
10	54	41	34	29	53	41	33	28	40	33	28		39	33	28		38	32	28	26

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1352	1352	1352
5°	1347	1348	1376
10°	1320	1332	1341
15°	1330	1323	1331
20°	1308	1308	1322
25°	1268	1295	1310
30°	1250	1272	1306
35°	1221	1253	1281
40°	1173	1230	1235
45°	1138	1178	1180
50°	1101	1150	1128
55°	1049	1069	1061
60°	981	990	973
65°	874	897	868
70°	750	753	732
75°	594	593	570
80°	398	387	372
85°	216	213	201

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 1209 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	47.3	3.7
10°-20°	133.9	10.6
20°-30°	200.6	15.8
30°-40°	237.8	18.8
40°-50°	238.2	18.8
50°-60°	202.2	16.0
60°-70°	136.3	10.8
70°-80°	59.9	4.7
80°-90°	9.7	0.8
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°	381.8	30.2
0°-40°	619.6	48.9
0°-60°	1060.0	83.7
0°-90°	1266.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1266.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	502	502	502	502	502	
5°	499	498	499	498	510	47
15°	478	472	475	477	478	133
25°	427	429	436	442	441	197
35°	372	373	381	390	390	231
45°	299	305	310	318	310	231
55°	224	222	228	226	226	199
65°	137	136	141	135	136	137
75°	57	56	57	53	55	61
85°	7	7	7	7	6	10
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	502.3	502.3	502.3	502.3	502.3
2.5°	506.7	502.8	499.3	503.4	505.9
5°	498.7	497.6	498.9	497.5	509.5
7.5°	488.5	493.0	495.6	494.0	494.7
10°	483.1	481.5	487.3	491.3	490.7
12.5°	477.2	479.6	479.9	484.2	484.6
15°	477.5	472.0	474.9	477.4	477.6
17.5°	459.0	465.0	467.0	472.6	465.6
20°	456.7	452.4	456.7	462.5	461.6
22.5°	442.8	437.9	447.3	452.4	452.1
25°	427.0	429.3	436.3	442.0	441.1
27.5°	413.1	415.8	425.8	433.6	428.6
30°	402.4	401.0	409.4	416.4	420.3
32.5°	383.2	388.2	398.0	405.0	401.3
35°	371.6	372.7	381.4	390.2	389.9
37.5°	351.3	356.5	368.6	371.0	368.8
40°	334.0	339.1	350.1	352.8	351.7
42.5°	321.2	322.1	331.5	334.6	329.7
45°	299.0	304.6	309.6	317.6	310.1
47.5°	280.1	282.6	293.5	295.7	291.7
50°	262.9	263.8	274.7	272.1	269.5
52.5°	241.3	245.1	251.3	250.7	247.7
55°	223.5	222.0	227.8	226.3	226.2
57.5°	202.2	204.8	209.6	207.1	203.1
60°	182.2	182.2	184.0	181.2	180.7
62.5°	159.9	160.7	161.1	157.7	163.2
65°	137.3	135.5	140.8	135.4	136.3
67.5°	116.5	117.4	116.9	113.5	114.8
70°	95.3	96.5	95.7	91.8	93.0
72.5°	76.0	74.6	75.5	70.7	72.9
75°	57.1	56.0	57.0	53.0	54.8
77.5°	38.9	39.8	39.2	37.0	38.3
80°	25.7	25.0	25.0	23.7	24.0
82.5°	15.0	14.3	14.1	13.7	14.3
85°	7.0	6.8	6.9	6.7	6.5
87.5°	2.5	2.6	2.6	2.5	2.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)