

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: P560460

Luminaire Tested: FSR-12-2-LD4-2LO-40-UNV-81-96-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560460
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-LD4-2LO-40-UNV-81-96-EDD-90
Description: 1X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1820.0 lumens
Efficiency: N/A
Efficacy: 77.8 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

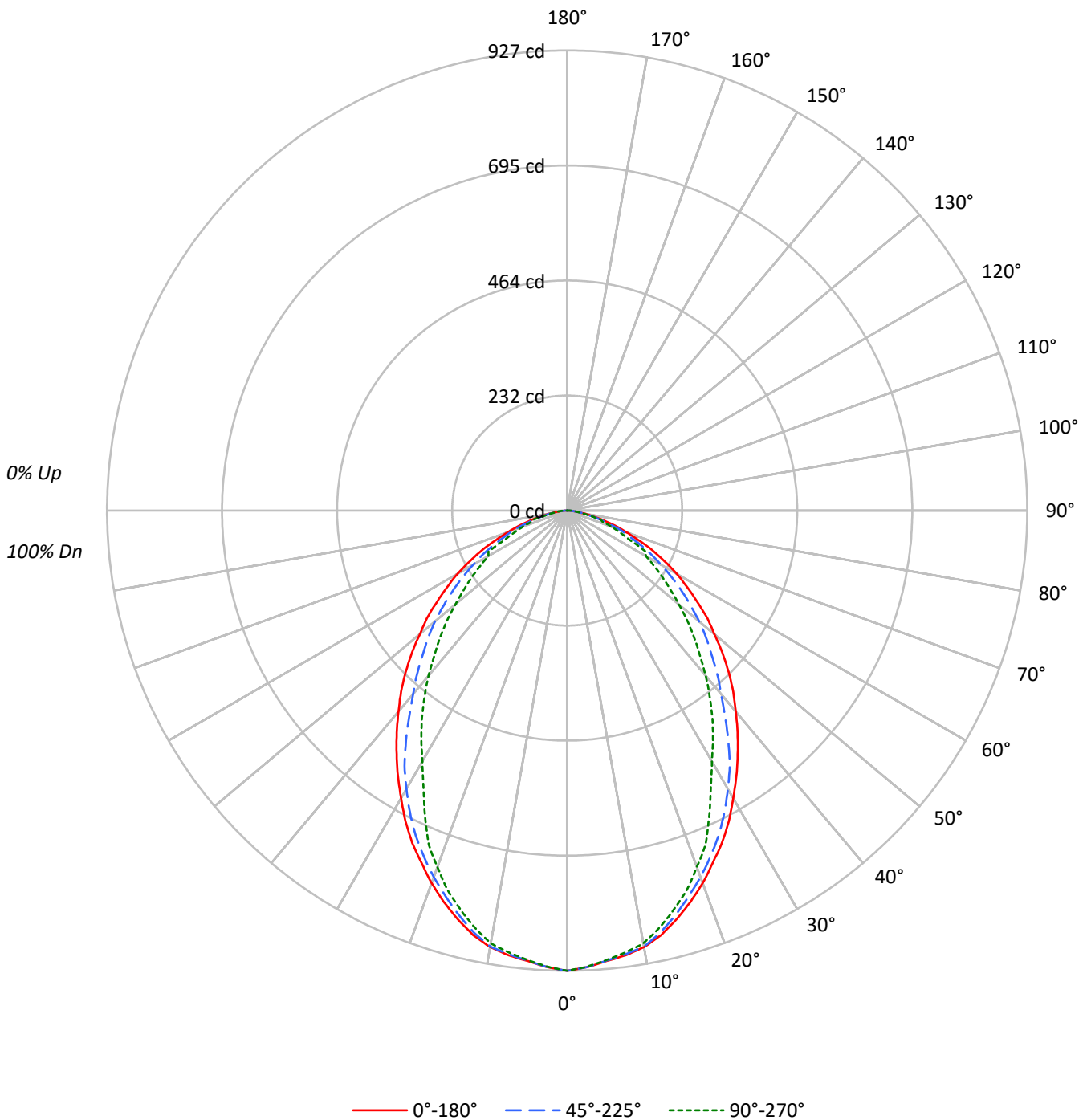
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P560460

CATALOG NUMBER: FSR-12-2-LD4-2LO-40-UNV-81-96-EDD-90

Luminous Intensity Polar Plot





TEST NUMBER: P560460

CATALOG NUMBER: FSR-12-2-LD4-2LO-40-UNV-81-96-EDD-90

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°	4990	4990	4990
5°	4922	4916	4910
10°	4879	4873	4838
15°	4748	4700	4634
20°	4573	4499	4377
25°	4385	4290	4023
30°	4156	4023	3623
35°	3936	3718	3352
40°	3712	3388	3050
45°	3500	3133	2758
50°	3239	2908	2459
55°	2997	2635	2202
60°	2746	2353	1973
65°	2416	2060	1747
70°	1991	1805	1484
75°	1582	1381	1449
80°	1063	998	930
85°	661	797	926

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3500 cd/sqm



TEST NUMBER: P560460

CATALOG NUMBER: FSR-12-2-LD4-2LO-40-UNV-81-96-EDD-90

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	86.3	4.7
10°-20°	236.8	13.0
20°-30°	327.9	18.0
30°-40°	349.6	19.2
40°-50°	319.0	17.5
50°-60°	249.9	13.7
60°-70°	162.9	8.9
70°-80°	72.1	4.0
80°-90°	15.5	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°	651.0	35.8
0°-40°	1000.7	55.0
0°-60°	1569.5	86.2
0°-90°	1820.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1820.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	927	927	927	927	927	
5°	911	910	910	909	909	86
15°	852	852	844	835	832	240
25°	738	734	722	697	677	339
35°	599	595	566	523	510	375
45°	460	450	412	377	362	354
55°	319	310	281	248	235	286
65°	190	179	162	165	137	187
75°	76	71	66	63	70	82
85°	11	12	13	14	15	15
90°	0	0	0	0	0	



TEST NUMBER: P560460

CATALOG NUMBER: FSR-12-2-LD4-2LO-40-UNV-81-96-EDD-90

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	927.1	927.1	927.1	927.1	927.1
2.5°	920.7	920.7	920.7	919.6	919.6
5°	911.0	909.9	909.9	908.9	908.9
7.5°	903.5	902.4	901.4	900.3	898.1
10°	892.8	892.8	891.7	886.4	885.3
12.5°	875.6	874.6	870.3	862.8	860.6
15°	852.1	852.1	843.5	834.9	831.7
17.5°	826.3	825.3	814.5	806.0	801.7
20°	798.5	796.3	785.6	771.7	764.2
22.5°	767.4	767.4	754.5	736.3	728.8
25°	738.5	734.2	722.4	696.7	677.4
27.5°	705.2	698.8	685.9	649.5	627.0
30°	668.8	665.6	647.4	600.2	583.0
32.5°	634.5	629.1	609.8	560.5	546.6
35°	599.1	594.8	565.9	523.0	510.2
37.5°	563.8	558.4	522.0	487.7	471.6
40°	528.4	522.0	482.3	451.2	434.1
42.5°	495.2	486.6	448.0	414.8	395.5
45°	459.8	450.1	411.6	377.3	362.3
47.5°	424.4	415.8	380.5	345.1	328.0
50°	386.9	379.4	347.3	311.9	293.7
52.5°	355.8	344.0	313.0	277.6	262.6
55°	319.4	309.7	280.8	247.6	234.7
57.5°	286.2	276.5	249.7	218.6	207.9
60°	255.1	241.1	218.6	191.8	183.3
62.5°	220.8	210.1	190.8	168.3	179.0
65°	189.7	179.0	161.8	165.1	137.2
67.5°	155.4	150.0	135.0	120.0	115.8
70°	126.5	120.0	114.7	98.6	94.3
72.5°	100.7	94.3	86.8	78.2	75.0
75°	76.1	70.7	66.4	63.2	69.7
77.5°	52.5	50.4	47.2	43.9	42.9
80°	34.3	33.2	32.2	31.1	30.0
82.5°	20.4	20.4	20.4	20.4	20.4
85°	10.7	11.8	12.9	13.9	15.0
87.5°	6.4	6.4	7.5	8.6	9.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)