

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: P560968

Luminaire Tested: FSR-12-4-LD4-1LO-35-UNV-81-88-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560968
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-12-4-LD4-1LO-35-UNV-81-88-EDD-90
Description: 1X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1665.0 lumens
Efficiency: N/A
Efficacy: 71.2 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

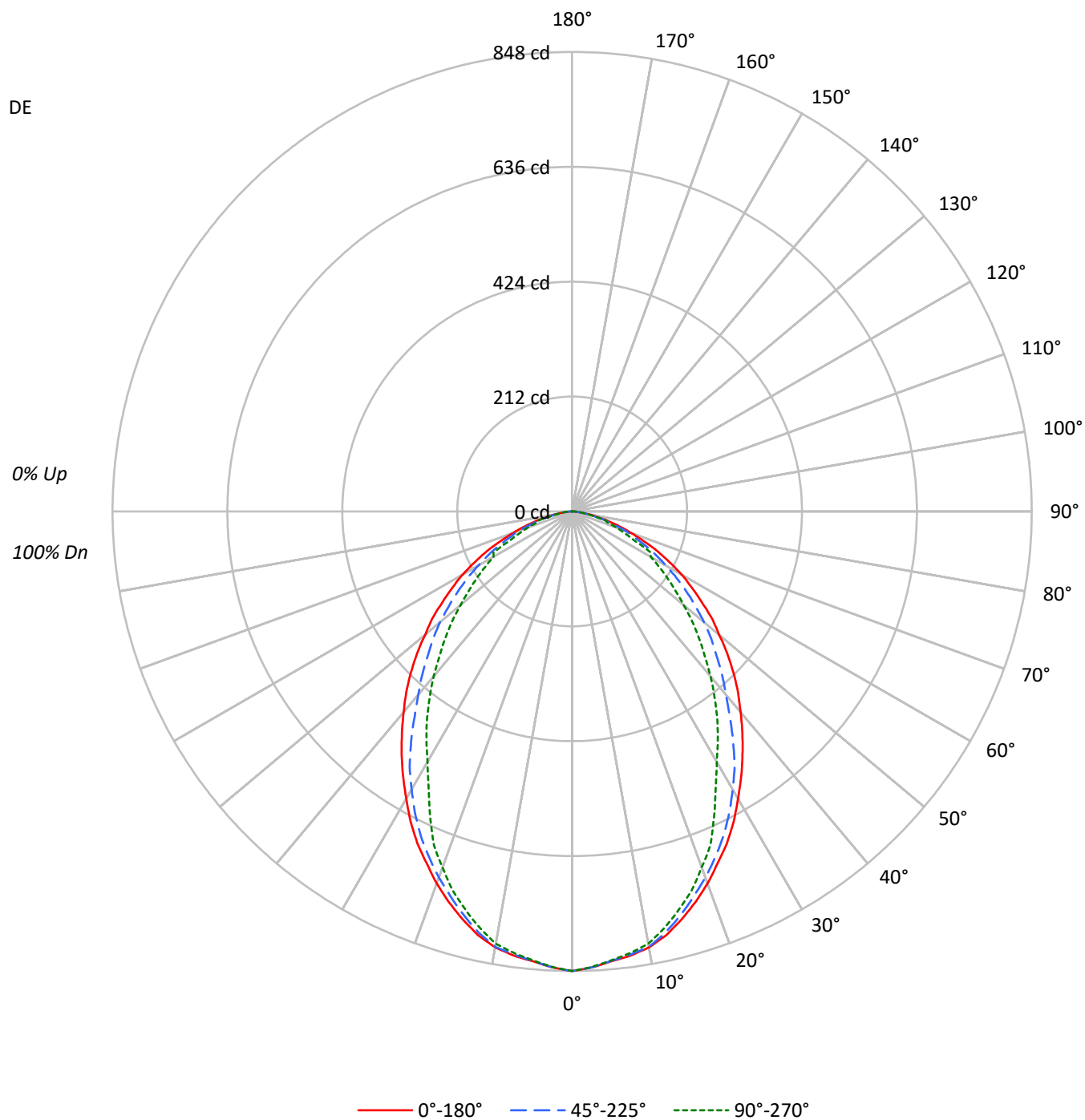
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P560968

CATALOG NUMBER: FSR-12-4-LD4-1LO-35-UNV-81-88-EDD-90

Luminous Intensity Polar Plot





TEST NUMBER: P560968

CATALOG NUMBER: FSR-12-4-LD4-1LO-35-UNV-81-88-EDD-90

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20			
RC	80				70				50				30				10			
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	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°	2282	2282	2282
5°	2251	2249	2246
10°	2232	2229	2213
15°	2172	2150	2120
20°	2092	2058	2002
25°	2006	1962	1840
30°	1901	1840	1657
35°	1801	1701	1533
40°	1698	1550	1395
45°	1601	1433	1261
50°	1482	1330	1125
55°	1371	1205	1007
60°	1256	1076	903
65°	1105	943	799
70°	910	825	679
75°	724	632	662
80°	487	456	426
85°	303	364	423

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1601 cd/sqm

TEST NUMBER: P560968

CATALOG NUMBER: FSR-12-4-LD4-1LO-35-UNV-81-88-EDD-90

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	79.0	4.7
10°-20°	216.7	13.0
20°-30°	300.0	18.0
30°-40°	319.9	19.2
40°-50°	291.8	17.5
50°-60°	228.6	13.7
60°-70°	149.0	8.9
70°-80°	66.0	4.0
80°-90°	14.2	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°	595.6	35.8
0°-40°	915.4	55.0
0°-60°	1435.8	86.2
0°-90°	1665.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1665.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	848	848	848	848	848	
5°	833	832	832	832	832	79
15°	780	780	772	764	761	219
25°	676	672	661	637	620	310
35°	548	544	518	478	467	343
45°	421	412	376	345	331	324
55°	292	283	257	226	215	262
65°	174	164	148	151	126	171
75°	70	65	61	58	64	75
85°	10	11	12	13	14	14
90°	0	0	0	0	0	

TEST NUMBER: P560968

CATALOG NUMBER: FSR-12-4-LD4-1LO-35-UNV-81-88-EDD-90

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	848.1	848.1	848.1	848.1	848.1
2.5°	842.2	842.2	842.2	841.3	841.3
5°	833.4	832.4	832.4	831.5	831.5
7.5°	826.6	825.6	824.6	823.6	821.7
10°	816.8	816.8	815.8	810.9	809.9
12.5°	801.1	800.1	796.2	789.3	787.3
15°	779.5	779.5	771.7	763.8	760.9
17.5°	756.0	755.0	745.2	737.3	733.4
20°	730.5	728.5	718.7	706.0	699.1
22.5°	702.0	702.0	690.3	673.6	666.7
25°	675.6	671.6	660.9	637.3	619.7
27.5°	645.2	639.3	627.5	594.2	573.6
30°	611.8	608.9	592.2	549.1	533.4
32.5°	580.5	575.6	557.9	512.8	500.1
35°	548.1	544.2	517.7	478.5	466.7
37.5°	515.7	510.8	477.5	446.1	431.4
40°	483.4	477.5	441.2	412.8	397.1
42.5°	453.0	445.1	409.8	379.5	361.8
45°	420.6	411.8	376.5	345.1	331.4
47.5°	388.3	380.4	348.1	315.7	300.0
50°	354.0	347.1	317.7	285.3	268.7
52.5°	325.5	314.7	286.3	253.9	240.2
55°	292.2	283.4	256.9	226.5	214.7
57.5°	261.8	253.0	228.5	200.0	190.2
60°	233.4	220.6	200.0	175.5	167.7
62.5°	202.0	192.2	174.5	153.9	163.7
65°	173.5	163.7	148.1	151.0	125.5
67.5°	142.2	137.3	123.5	109.8	105.9
70°	115.7	109.8	104.9	90.2	86.3
72.5°	92.2	86.3	79.4	71.6	68.6
75°	69.6	64.7	60.8	57.8	63.7
77.5°	48.0	46.1	43.1	40.2	39.2
80°	31.4	30.4	29.4	28.4	27.5
82.5°	18.6	18.6	18.6	18.6	18.6
85°	9.8	10.8	11.8	12.7	13.7
87.5°	5.9	5.9	6.9	7.8	8.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)