

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: P560456

Luminaire Tested: FSR-12-2-LD4-2LO-40-UNV-81-88-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560456
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-81-88-EDD-90
Description: 1X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1551.0 lumens
Efficiency: N/A
Efficacy: 66.3 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

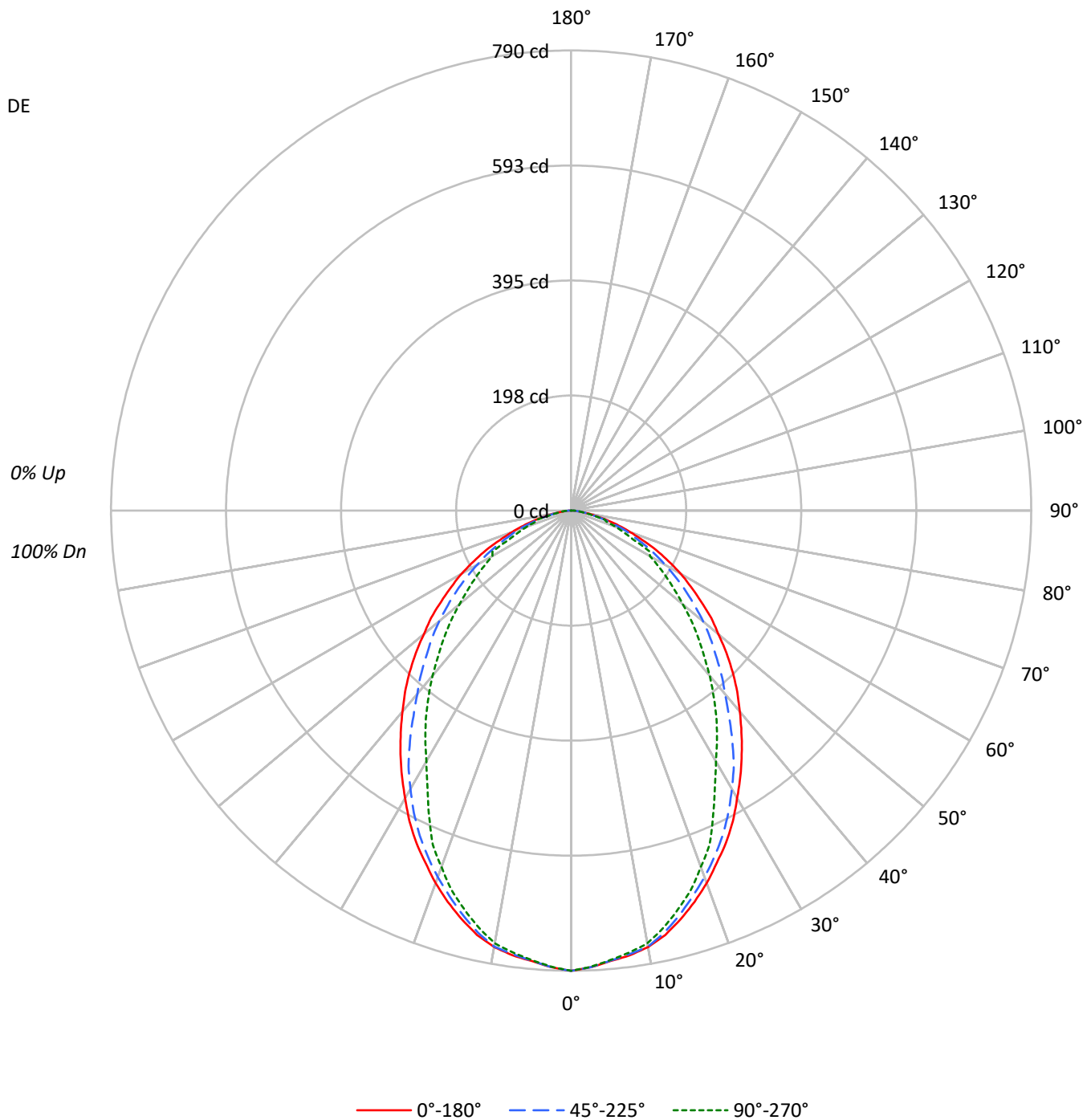
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P560456

CATALOG NUMBER: FSR-12-2-LD4-2LO-40-UNV-81-88-EDD-90

Luminous Intensity Polar Plot





TEST NUMBER: P560456

CATALOG NUMBER: FSR-12-2-LD4-2LO-40-UNV-81-88-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	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°	4252	4252	4252
5°	4195	4189	4184
10°	4158	4153	4123
15°	4046	4005	3949
20°	3897	3834	3730
25°	3737	3656	3428
30°	3542	3429	3088
35°	3355	3169	2857
40°	3164	2888	2599
45°	2982	2669	2350
50°	2761	2478	2096
55°	2554	2245	1877
60°	2340	2005	1681
65°	2059	1756	1489
70°	1696	1537	1265
75°	1347	1177	1235
80°	905	849	793
85°	562	679	790

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2982 cd/sqm



TEST NUMBER: P560456

CATALOG NUMBER: FSR-12-2-LD4-2LO-40-UNV-81-88-EDD-90

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	73.5	4.7
10°-20°	201.8	13.0
20°-30°	279.4	18.0
30°-40°	298.0	19.2
40°-50°	271.8	17.5
50°-60°	212.9	13.7
60°-70°	138.8	8.9
70°-80°	61.5	4.0
80°-90°	13.2	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°	554.8	35.8
0°-40°	852.8	55.0
0°-60°	1337.5	86.2
0°-90°	1551.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1551.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	790	790	790	790	790	
5°	776	775	775	774	774	74
15°	726	726	719	712	709	204
25°	629	626	616	594	577	289
35°	511	507	482	446	435	319
45°	392	384	351	322	309	302
55°	272	264	239	211	200	244
65°	162	152	138	141	117	159
75°	65	60	57	54	59	70
85°	9	10	11	12	13	13
90°	0	0	0	0	0	



TEST NUMBER: P560456

CATALOG NUMBER: FSR-12-2-LD4-2LO-40-UNV-81-88-EDD-90

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	790.1	790.1	790.1	790.1	790.1
2.5°	784.6	784.6	784.6	783.7	783.7
5°	776.4	775.4	775.4	774.5	774.5
7.5°	770.0	769.1	768.1	767.2	765.4
10°	760.8	760.8	759.9	755.4	754.4
12.5°	746.2	745.3	741.7	735.3	733.4
15°	726.1	726.1	718.8	711.5	708.8
17.5°	704.2	703.3	694.2	686.8	683.2
20°	680.5	678.6	669.5	657.6	651.2
22.5°	654.0	654.0	643.0	627.5	621.1
25°	629.3	625.7	615.6	593.7	577.2
27.5°	601.0	595.5	584.6	553.5	534.3
30°	569.9	567.2	551.7	511.5	496.9
32.5°	540.7	536.1	519.7	477.7	465.8
35°	510.6	506.9	482.3	445.7	434.8
37.5°	480.4	475.9	444.8	415.6	401.9
40°	450.3	444.8	411.0	384.5	369.9
42.5°	422.0	414.7	381.8	353.5	337.0
45°	391.8	383.6	350.7	321.5	308.7
47.5°	361.7	354.4	324.2	294.1	279.5
50°	329.7	323.3	295.9	265.8	250.3
52.5°	303.2	293.2	266.7	236.6	223.8
55°	272.2	264.0	239.3	211.0	200.0
57.5°	243.9	235.6	212.8	186.3	177.2
60°	217.4	205.5	186.3	163.5	156.2
62.5°	188.2	179.0	162.6	143.4	152.5
65°	161.7	152.5	137.9	140.7	116.9
67.5°	132.4	127.9	115.1	102.3	98.6
70°	107.8	102.3	97.7	84.0	80.4
72.5°	85.9	80.4	74.0	66.7	63.9
75°	64.8	60.3	56.6	53.9	59.4
77.5°	44.8	42.9	40.2	37.4	36.5
80°	29.2	28.3	27.4	26.5	25.6
82.5°	17.4	17.4	17.4	17.4	17.4
85°	9.1	10.0	11.0	11.9	12.8
87.5°	5.5	5.5	6.4	7.3	8.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)