

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: P562217

Luminaire Tested: FSR-24-4-LD4-1LO-40-UNV-93-88-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562217
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-24-4-LD4-1LO-40-UNV-93-88-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2490.0 lumens
Efficiency: N/A
Efficacy: 106.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

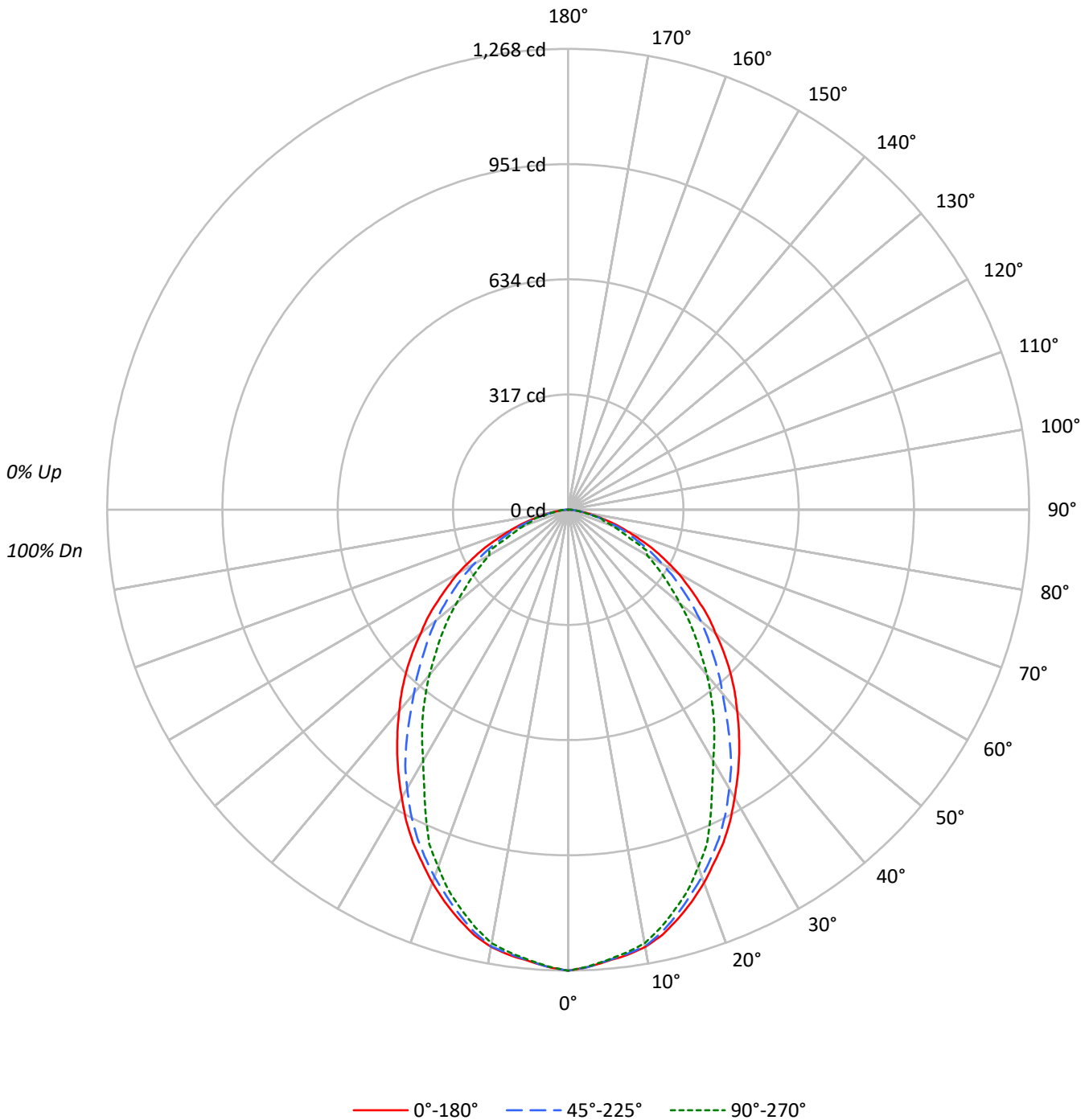
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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				
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°	1707	1707	1707
5°	1683	1681	1679
10°	1669	1667	1655
15°	1624	1607	1585
20°	1564	1539	1497
25°	1500	1467	1376
30°	1422	1376	1239
35°	1346	1272	1146
40°	1270	1159	1043
45°	1197	1071	943
50°	1108	994	841
55°	1025	901	753
60°	939	805	675
65°	826	705	598
70°	681	617	507
75°	541	473	495
80°	363	341	318
85°	227	272	316

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1197 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	118.1	4.7
10°-20°	324.0	13.0
20°-30°	448.6	18.0
30°-40°	478.3	19.2
40°-50°	436.4	17.5
50°-60°	341.9	13.7
60°-70°	222.8	8.9
70°-80°	98.7	4.0
80°-90°	21.2	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°	890.7	35.8
0°-40°	1369.0	55.0
0°-60°	2147.3	86.2
0°-90°	2490.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2490.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1268	1268	1268	1268	1268	
5°	1246	1245	1245	1243	1243	118
15°	1166	1166	1154	1142	1138	328
25°	1010	1004	988	953	927	464
35°	820	814	774	716	698	512
45°	629	616	563	516	496	485
55°	437	424	384	339	321	392
65°	260	245	221	226	188	256
75°	104	97	91	86	95	112
85°	15	16	18	19	20	20
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1268.4	1268.4	1268.4	1268.4	1268.4
2.5°	1259.6	1259.6	1259.6	1258.1	1258.1
5°	1246.4	1244.9	1244.9	1243.4	1243.4
7.5°	1236.1	1234.6	1233.2	1231.7	1228.8
10°	1221.5	1221.5	1220.0	1212.7	1211.2
12.5°	1198.0	1196.5	1190.7	1180.4	1177.5
15°	1165.7	1165.7	1154.0	1142.3	1137.9
17.5°	1130.5	1129.1	1114.4	1102.7	1096.8
20°	1092.4	1089.5	1074.8	1055.8	1045.5
22.5°	1049.9	1049.9	1032.3	1007.4	997.1
25°	1010.3	1004.4	988.3	953.1	926.7
27.5°	964.8	956.0	938.4	888.6	857.8
30°	915.0	910.6	885.7	821.1	797.7
32.5°	868.1	860.7	834.3	766.9	747.8
35°	819.7	813.8	774.2	715.6	698.0
37.5°	771.3	764.0	714.1	667.2	645.2
40°	722.9	714.1	659.8	617.3	593.9
42.5°	677.4	665.7	612.9	567.5	541.1
45°	629.1	615.9	563.1	516.1	495.6
47.5°	580.7	568.9	520.5	472.2	448.7
50°	529.3	519.1	475.1	426.7	401.8
52.5°	486.8	470.7	428.2	379.8	359.3
55°	437.0	423.8	384.2	338.7	321.1
57.5°	391.5	378.3	341.7	299.1	284.5
60°	349.0	329.9	299.1	262.5	250.7
62.5°	302.1	287.4	261.0	230.2	244.9
65°	259.5	244.9	221.4	225.8	187.7
67.5°	212.6	205.3	184.8	164.2	158.4
70°	173.0	164.2	156.9	134.9	129.0
72.5°	137.8	129.0	118.8	107.0	102.6
75°	104.1	96.8	90.9	86.5	95.3
77.5°	71.9	68.9	64.5	60.1	58.7
80°	46.9	45.5	44.0	42.5	41.1
82.5°	27.9	27.9	27.9	27.9	27.9
85°	14.7	16.1	17.6	19.1	20.5
87.5°	8.8	8.8	10.3	11.7	13.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)