

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: P560486

Luminaire Tested: FSR-12-2-LD4-2LO-40-UNV-93-87-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560486
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-93-87-EDD-90
Description: 1X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1816.0 lumens
Efficiency: N/A
Efficacy: 77.6 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

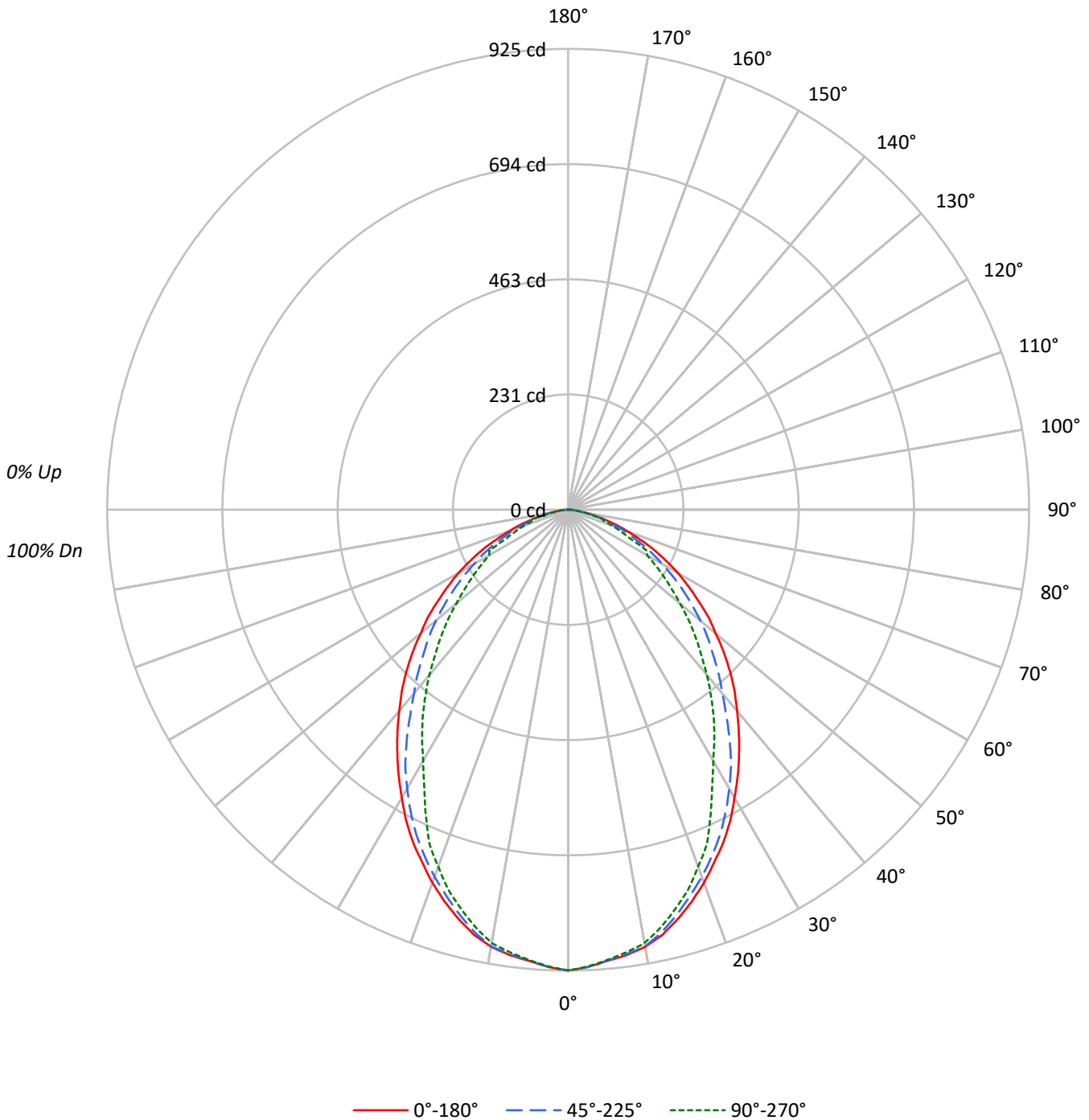
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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					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°	4978	4978	4978
5°	4911	4905	4900
10°	4868	4863	4827
15°	4737	4689	4624
20°	4563	4490	4367
25°	4375	4280	4014
30°	4147	4014	3616
35°	3928	3710	3344
40°	3704	3381	3043
45°	3492	3126	2751
50°	3233	2901	2453
55°	2990	2629	2198
60°	2739	2349	1969
65°	2411	2057	1743
70°	1986	1800	1481
75°	1578	1379	1445
80°	1060	995	927
85°	661	790	926

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3492 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	86.1	4.7
10°-20°	236.3	13.0
20°-30°	327.2	18.0
30°-40°	348.9	19.2
40°-50°	318.3	17.5
50°-60°	249.3	13.7
60°-70°	162.5	8.9
70°-80°	72.0	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°	649.6	35.8
0°-40°	998.5	55.0
0°-60°	1566.1	86.2
0°-90°	1816.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1816.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	925	925	925	925	925	
5°	909	908	908	907	907	86
15°	850	850	842	833	830	239
25°	737	733	721	695	676	338
35°	598	594	565	522	509	374
45°	459	449	411	376	362	353
55°	319	309	280	247	234	286
65°	189	179	162	165	137	187
75°	76	71	66	63	70	81
85°	11	12	13	14	15	15
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	925.0	925.0	925.0	925.0	925.0
2.5°	918.6	918.6	918.6	917.6	917.6
5°	909.0	907.9	907.9	906.9	906.9
7.5°	901.5	900.4	899.4	898.3	896.2
10°	890.8	890.8	889.8	884.4	883.3
12.5°	873.7	872.6	868.4	860.9	858.7
15°	850.2	850.2	841.6	833.1	829.9
17.5°	824.5	823.5	812.8	804.2	799.9
20°	796.7	794.6	783.9	770.0	762.5
22.5°	765.7	765.7	752.9	734.7	727.2
25°	736.8	732.6	720.8	695.1	675.9
27.5°	703.7	697.3	684.4	648.1	625.6
30°	667.3	664.1	645.9	598.9	581.8
32.5°	633.1	627.7	608.5	559.3	545.4
35°	597.8	593.5	564.7	521.9	509.0
37.5°	562.5	557.2	520.8	486.6	470.5
40°	527.2	520.8	481.2	450.2	433.1
42.5°	494.1	485.5	447.0	413.9	394.6
45°	458.8	449.2	410.7	376.4	361.5
47.5°	423.5	414.9	379.6	344.4	327.2
50°	386.1	378.6	346.5	311.2	293.0
52.5°	355.0	343.3	312.3	277.0	262.0
55°	318.7	309.1	280.2	247.0	234.2
57.5°	285.5	275.9	249.2	218.2	207.5
60°	254.5	240.6	218.2	191.4	182.9
62.5°	220.3	209.6	190.4	167.9	178.6
65°	189.3	178.6	161.5	164.7	136.9
67.5°	155.1	149.7	134.7	119.8	115.5
70°	126.2	119.8	114.4	98.4	94.1
72.5°	100.5	94.1	86.6	78.1	74.9
75°	75.9	70.6	66.3	63.1	69.5
77.5°	52.4	50.3	47.1	43.8	42.8
80°	34.2	33.2	32.1	31.0	29.9
82.5°	20.3	20.3	20.3	20.3	20.3
85°	10.7	11.8	12.8	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)