

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: P560045

Luminaire Tested: FSR-12-2-LD4-1STD-35-UNV-93-96-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560045
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-LD4-1STD-35-UNV-93-96-EDD
Description: 1X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR TEMPER GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1515.0 lumens
Efficiency: N/A
Efficacy: 91.3 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

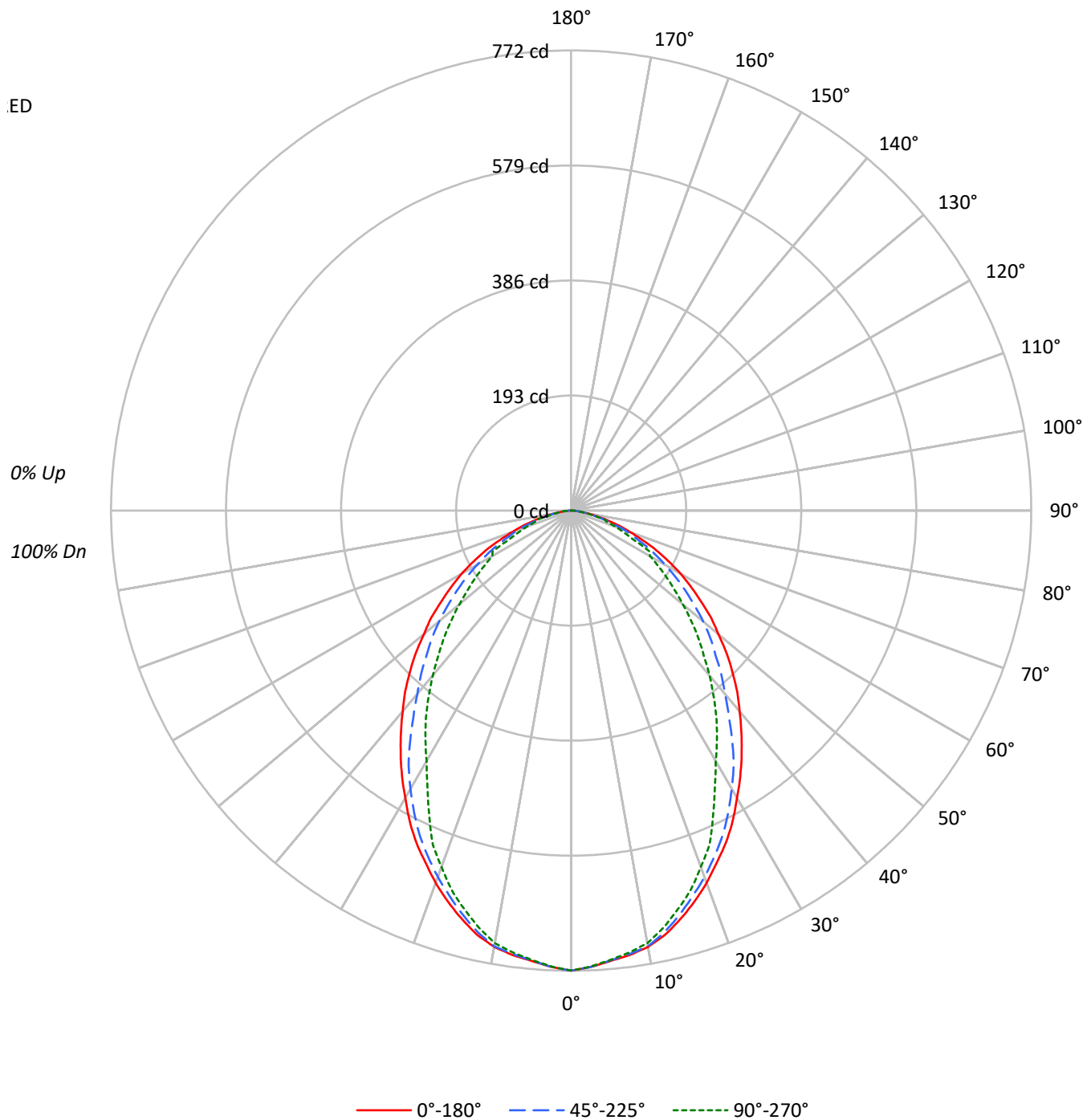
Input Watts (W): 16.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	4153	4153	4153
5°	4097	4092	4088
10°	4062	4057	4027
15°	3952	3912	3857
20°	3807	3746	3643
25°	3650	3571	3348
30°	3460	3349	3016
35°	3277	3095	2790
40°	3090	2821	2538
45°	2913	2608	2296
50°	2697	2421	2047
55°	2495	2193	1833
60°	2285	1959	1643
65°	2011	1715	1454
70°	1657	1503	1235
75°	1316	1150	1206
80°	883	831	775
85°	550	661	772

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2913 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	71.8	4.7
10°-20°	197.2	13.0
20°-30°	272.9	18.0
30°-40°	291.0	19.2
40°-50°	265.5	17.5
50°-60°	208.0	13.7
60°-70°	135.6	8.9
70°-80°	60.1	4.0
80°-90°	12.9	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°	541.9	35.8
0°-40°	833.0	55.0
0°-60°	1306.5	86.2
0°-90°	1515.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1515.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	772	772	772	772	772	
5°	758	757	757	757	757	72
15°	709	709	702	695	692	199
25°	615	611	601	580	564	282
35°	499	495	471	435	425	312
45°	383	375	343	314	302	295
55°	266	258	234	206	195	238
65°	158	149	135	137	114	156
75°	63	59	55	53	58	68
85°	9	10	11	12	12	12
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	771.7	771.7	771.7	771.7	771.7
2.5°	766.4	766.4	766.4	765.5	765.5
5°	758.3	757.4	757.4	756.6	756.6
7.5°	752.1	751.2	750.3	749.4	747.6
10°	743.2	743.2	742.3	737.8	736.9
12.5°	728.9	728.0	724.4	718.2	716.4
15°	709.3	709.3	702.1	695.0	692.3
17.5°	687.9	687.0	678.0	670.9	667.3
20°	664.7	662.9	654.0	642.4	636.1
22.5°	638.8	638.8	628.1	612.9	606.7
25°	614.7	611.1	601.3	579.9	563.8
27.5°	587.0	581.7	571.0	540.7	521.9
30°	556.7	554.0	538.9	499.6	485.3
32.5°	528.2	523.7	507.6	466.6	455.0
35°	498.7	495.2	471.1	435.4	424.7
37.5°	469.3	464.8	434.5	405.9	392.6
40°	439.8	434.5	401.5	375.6	361.3
42.5°	412.2	405.0	372.9	345.3	329.2
45°	382.7	374.7	342.6	314.0	301.6
47.5°	353.3	346.2	316.7	287.3	273.0
50°	322.1	315.8	289.1	259.6	244.5
52.5°	296.2	286.4	260.5	231.1	218.6
55°	265.9	257.8	233.7	206.1	195.4
57.5°	238.2	230.2	207.9	182.0	173.1
60°	212.3	200.7	182.0	159.7	152.6
62.5°	183.8	174.9	158.8	140.1	149.0
65°	157.9	149.0	134.7	137.4	114.2
67.5°	129.4	124.9	112.4	99.9	96.4
70°	105.3	99.9	95.5	82.1	78.5
72.5°	83.9	78.5	72.3	65.1	62.5
75°	63.3	58.9	55.3	52.6	58.0
77.5°	43.7	41.9	39.3	36.6	35.7
80°	28.5	27.7	26.8	25.9	25.0
82.5°	17.0	17.0	17.0	17.0	17.0
85°	8.9	9.8	10.7	11.6	12.5
87.5°	5.4	5.4	6.2	7.1	8.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)