

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: P560043

Luminaire Tested: FSR-12-2-LD4-1STD-35-UNV-93-94-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560043
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-93-94-EDD
Description: 1X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 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: 1532.0 lumens
Efficiency: N/A
Efficacy: 92.3 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

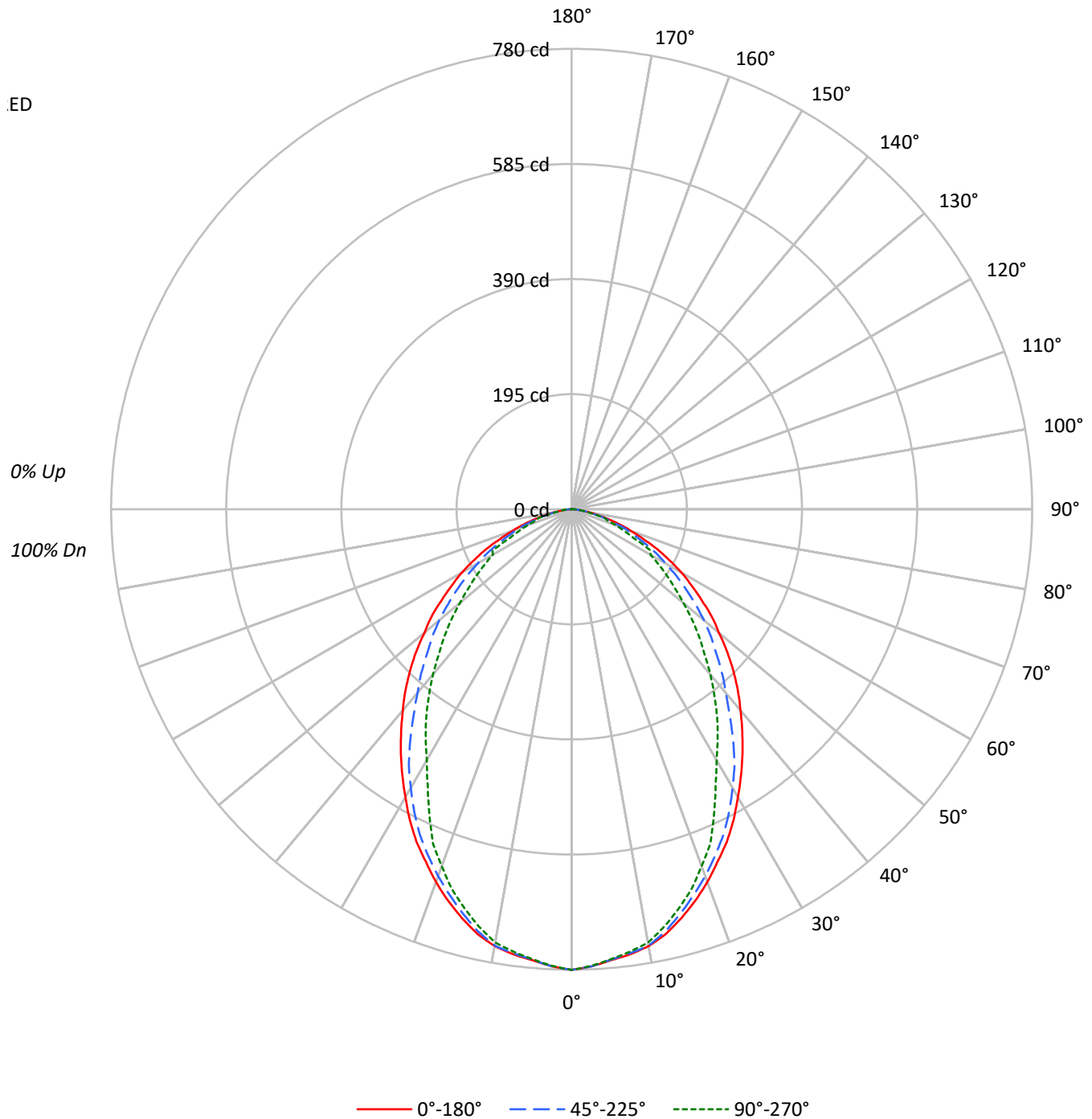
Input Watts (W): 16.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	100	100	100	100	100		
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87	87	87	87	87	87	87		
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75	75	75	75	75	75	75		
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65	65	65	65	65	65	65		
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56	56	56	56	56	56	56		
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50	50	50	50	50	50	50		
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44	44	44	44	44	44	44		
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40	40	40	40	40	40	40		
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36	36	36	36	36	36	36		
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33	33	33	33	33	33	33		
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30	30	30	30	30	30	30		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4200	4200	4200
5°	4143	4138	4133
10°	4107	4102	4073
15°	3996	3956	3901
20°	3849	3788	3684
25°	3691	3611	3386
30°	3499	3386	3050
35°	3313	3129	2821
40°	3125	2852	2567
45°	2946	2637	2321
50°	2727	2447	2070
55°	2522	2218	1854
60°	2311	1981	1661
65°	2034	1734	1471
70°	1676	1519	1249
75°	1333	1162	1219
80°	896	840	784
85°	556	667	778

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2946 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	72.6	4.7
10°-20°	199.4	13.0
20°-30°	276.0	18.0
30°-40°	294.3	19.2
40°-50°	268.5	17.5
50°-60°	210.3	13.7
60°-70°	137.1	8.9
70°-80°	60.7	4.0
80°-90°	13.0	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°	548.0	35.8
0°-40°	842.3	55.0
0°-60°	1321.1	86.2
0°-90°	1532.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1532.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	780	780	780	780	780	
5°	767	766	766	765	765	73
15°	717	717	710	703	700	202
25°	622	618	608	586	570	285
35°	504	501	476	440	429	315
45°	387	379	346	318	305	298
55°	269	261	236	208	198	241
65°	160	151	136	139	116	157
75°	64	60	56	53	59	69
85°	9	10	11	12	13	12
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	780.4	780.4	780.4	780.4	780.4
2.5°	775.0	775.0	775.0	774.1	774.1
5°	766.8	765.9	765.9	765.0	765.0
7.5°	760.5	759.6	758.7	757.8	756.0
10°	751.5	751.5	750.6	746.1	745.2
12.5°	737.1	736.2	732.6	726.2	724.4
15°	717.2	717.2	710.0	702.8	700.1
17.5°	695.6	694.7	685.7	678.4	674.8
20°	672.1	670.3	661.3	649.6	643.2
22.5°	646.0	646.0	635.1	619.8	613.5
25°	621.6	618.0	608.1	586.4	570.2
27.5°	593.6	588.2	577.4	546.7	527.8
30°	563.0	560.2	544.9	505.2	490.8
32.5°	534.1	529.6	513.3	471.8	460.1
35°	504.3	500.7	476.3	440.3	429.4
37.5°	474.5	470.0	439.4	410.5	397.0
40°	444.8	439.4	406.0	379.8	365.4
42.5°	416.8	409.6	377.1	349.1	332.9
45°	387.0	378.9	346.4	317.6	304.9
47.5°	357.3	350.0	320.3	290.5	276.1
50°	325.7	319.4	292.3	262.5	247.2
52.5°	299.5	289.6	263.4	233.7	221.0
55°	268.8	260.7	236.4	208.4	197.6
57.5°	240.9	232.8	210.2	184.0	175.0
60°	214.7	203.0	184.0	161.5	154.3
62.5°	185.8	176.8	160.6	141.6	150.7
65°	159.7	150.7	136.2	138.9	115.5
67.5°	130.8	126.3	113.7	101.0	97.4
70°	106.5	101.0	96.5	83.0	79.4
72.5°	84.8	79.4	73.1	65.9	63.2
75°	64.1	59.5	55.9	53.2	58.6
77.5°	44.2	42.4	39.7	37.0	36.1
80°	28.9	28.0	27.1	26.2	25.3
82.5°	17.1	17.1	17.1	17.1	17.1
85°	9.0	9.9	10.8	11.7	12.6
87.5°	5.4	5.4	6.3	7.2	8.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)