

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: P559683

Luminaire Tested: FSR-12-2-LD4-1HI-40-UNV-81-85-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559683
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-LD4-1HI-40-UNV-81-85-EDD
Description: 1X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1760.0 lumens
Efficiency: N/A
Efficacy: 81.5 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

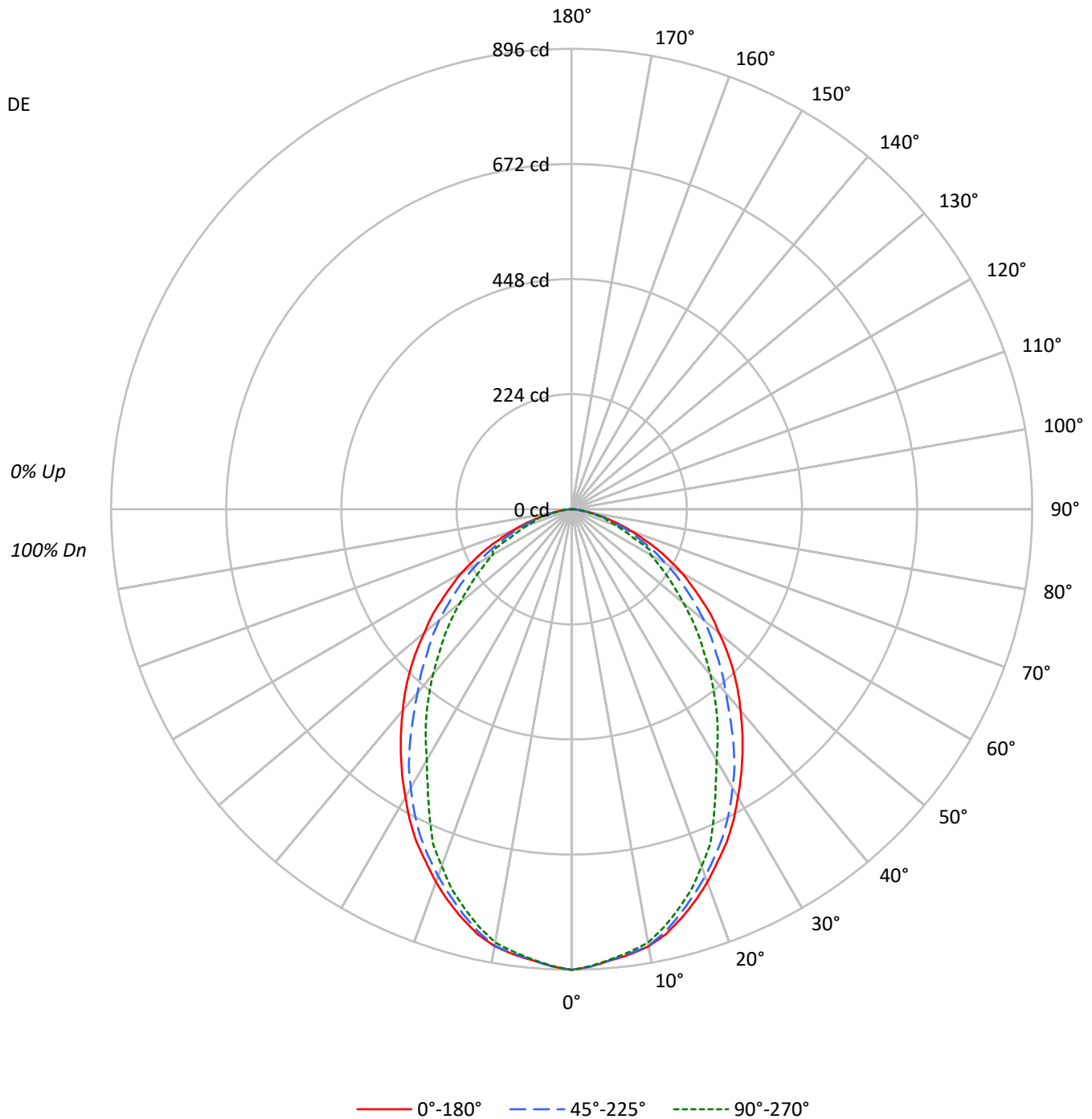
Input Watts (W): 21.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	50	30	10	0																			
RCR																																														
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	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°	4825	4825	4825
5°	4760	4754	4748
10°	4718	4712	4679
15°	4591	4545	4481
20°	4422	4351	4233
25°	4241	4149	3890
30°	4019	3890	3504
35°	3807	3595	3241
40°	3590	3277	2949
45°	3384	3029	2666
50°	3133	2812	2378
55°	2898	2548	2130
60°	2655	2275	1907
65°	2336	1993	1690
70°	1924	1745	1435
75°	1530	1337	1402
80°	1029	964	899
85°	642	766	895

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3384 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	83.5	4.7
10°-20°	229.0	13.0
20°-30°	317.1	18.0
30°-40°	338.1	19.2
40°-50°	308.4	17.5
50°-60°	241.6	13.7
60°-70°	157.5	8.9
70°-80°	69.8	4.0
80°-90°	15.0	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°	629.6	35.8
0°-40°	967.7	55.0
0°-60°	1517.7	86.2
0°-90°	1760.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1760.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	896	896	896	896	896	
5°	881	880	880	879	879	84
15°	824	824	816	807	804	232
25°	714	710	699	674	655	328
35°	579	575	547	506	493	362
45°	445	435	398	365	350	342
55°	309	300	272	239	227	277
65°	183	173	156	160	133	181
75°	74	68	64	61	67	79
85°	10	11	12	14	14	14
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	896.5	896.5	896.5	896.5	896.5
2.5°	890.3	890.3	890.3	889.3	889.3
5°	881.0	879.9	879.9	878.9	878.9
7.5°	873.7	872.7	871.6	870.6	868.5
10°	863.4	863.4	862.3	857.1	856.1
12.5°	846.8	845.7	841.6	834.3	832.3
15°	824.0	824.0	815.7	807.4	804.3
17.5°	799.1	798.1	787.7	779.4	775.3
20°	772.1	770.1	759.7	746.2	739.0
22.5°	742.1	742.1	729.7	712.0	704.8
25°	714.1	710.0	698.6	673.7	655.0
27.5°	682.0	675.8	663.3	628.1	606.3
30°	646.7	643.6	626.0	580.4	563.8
32.5°	613.6	608.4	589.7	542.1	528.6
35°	579.4	575.2	547.2	505.8	493.3
37.5°	545.2	540.0	504.7	471.6	456.0
40°	511.0	504.7	466.4	436.3	419.8
42.5°	478.8	470.5	433.2	401.1	382.4
45°	444.6	435.3	398.0	364.8	350.3
47.5°	410.4	402.1	367.9	333.7	317.2
50°	374.2	366.9	335.8	301.6	284.0
52.5°	344.1	332.7	302.6	268.4	253.9
55°	308.9	299.5	271.5	239.4	227.0
57.5°	276.7	267.4	241.5	211.4	201.1
60°	246.7	233.2	211.4	185.5	177.2
62.5°	213.5	203.1	184.5	162.7	173.1
65°	183.4	173.1	156.5	159.6	132.7
67.5°	150.3	145.1	130.6	116.1	111.9
70°	122.3	116.1	110.9	95.4	91.2
72.5°	97.4	91.2	84.0	75.7	72.6
75°	73.6	68.4	64.3	61.1	67.4
77.5°	50.8	48.7	45.6	42.5	41.5
80°	33.2	32.1	31.1	30.1	29.0
82.5°	19.7	19.7	19.7	19.7	19.7
85°	10.4	11.4	12.4	13.5	14.5
87.5°	6.2	6.2	7.3	8.3	9.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)