

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: P559134

Luminaire Tested: FSR-12-1-LD4-2HI-40-UNV-82-97-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559134
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-12-1-LD4-2HI-40-UNV-82-97-EDD-90
Description: 1X1 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1487.0 lumens
Efficiency: N/A
Efficacy: 68.8 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

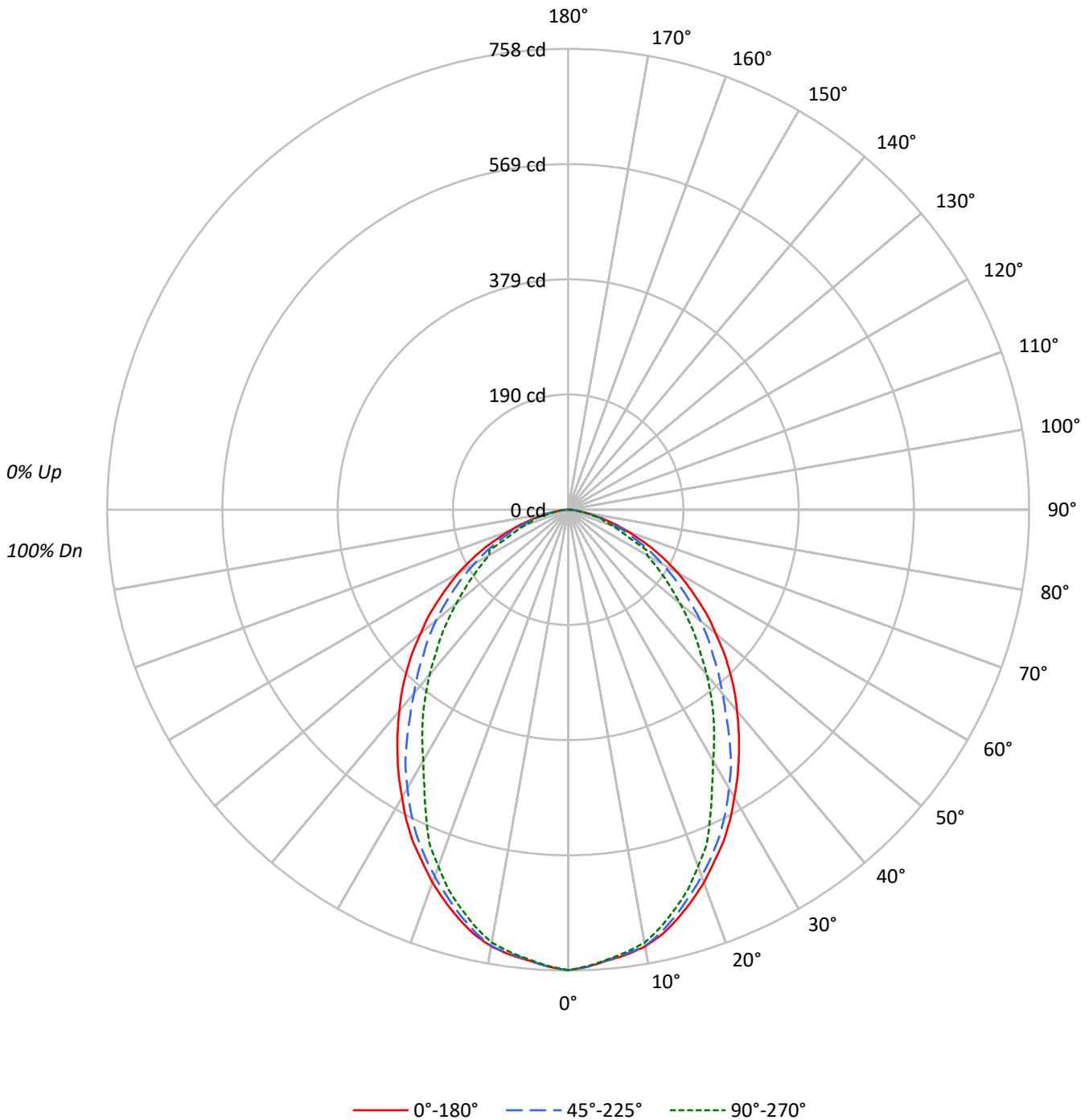
Input Watts (W): 21.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	8154	8154	8154
5°	8042	8032	8024
10°	7972	7964	7906
15°	7758	7680	7572
20°	7473	7353	7152
25°	7165	7010	6573
30°	6791	6574	5921
35°	6432	6076	5477
40°	6066	5538	4983
45°	5719	5119	4506
50°	5293	4751	4017
55°	4898	4305	3599
60°	4486	3845	3223
65°	3948	3367	2855
70°	3251	2949	2426
75°	2587	2258	2366
80°	1736	1630	1519
85°	1087	1297	1519

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5719 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	70.5	4.7
10°-20°	193.5	13.0
20°-30°	267.9	18.0
30°-40°	285.7	19.2
40°-50°	260.6	17.5
50°-60°	204.2	13.7
60°-70°	133.1	8.9
70°-80°	59.0	4.0
80°-90°	12.6	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°	531.9	35.8
0°-40°	817.6	55.0
0°-60°	1282.3	86.2
0°-90°	1487.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1487.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	758	758	758	758	758	
5°	744	743	743	743	743	71
15°	696	696	689	682	680	196
25°	603	600	590	569	553	277
35°	490	486	462	427	417	306
45°	376	368	336	308	296	289
55°	261	253	229	202	192	234
65°	155	146	132	135	112	153
75°	62	58	54	52	57	67
85°	9	10	10	11	12	12
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	757.5	757.5	757.5	757.5	757.5
2.5°	752.2	752.2	752.2	751.3	751.3
5°	744.3	743.4	743.4	742.6	742.6
7.5°	738.2	737.3	736.4	735.6	733.8
10°	729.4	729.4	728.6	724.2	723.3
12.5°	715.4	714.5	711.0	704.9	703.2
15°	696.2	696.2	689.2	682.1	679.5
17.5°	675.1	674.3	665.5	658.5	655.0
20°	652.4	650.6	641.9	630.5	624.4
22.5°	627.0	627.0	616.5	601.6	595.5
25°	603.3	599.8	590.2	569.2	553.4
27.5°	576.2	570.9	560.4	530.7	512.3
30°	546.4	543.8	528.9	490.4	476.4
32.5°	518.4	514.0	498.3	458.0	446.6
35°	489.5	486.0	462.4	427.3	416.8
37.5°	460.6	456.2	426.5	398.4	385.3
40°	431.7	426.5	394.1	368.7	354.6
42.5°	404.6	397.6	366.0	338.9	323.1
45°	375.7	367.8	336.3	308.2	296.0
47.5°	346.8	339.8	310.9	282.0	268.0
50°	316.1	310.0	283.7	254.8	239.9
52.5°	290.7	281.1	255.7	226.8	214.5
55°	261.0	253.1	229.4	202.3	191.8
57.5°	233.8	225.9	204.0	178.6	169.9
60°	208.4	197.0	178.6	156.7	149.7
62.5°	180.4	171.6	155.9	137.5	146.2
65°	155.0	146.2	132.2	134.9	112.1
67.5°	127.0	122.6	110.3	98.1	94.6
70°	103.3	98.1	93.7	80.6	77.1
72.5°	82.3	77.1	70.9	63.9	61.3
75°	62.2	57.8	54.3	51.7	56.9
77.5°	42.9	41.2	38.5	35.9	35.0
80°	28.0	27.1	26.3	25.4	24.5
82.5°	16.6	16.6	16.6	16.6	16.6
85°	8.8	9.6	10.5	11.4	12.3
87.5°	5.3	5.3	6.1	7.0	7.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)