

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: P559142

Luminaire Tested: FSR-12-1-LD4-2HI-40-UNV-93-87-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559142
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-93-87-EDD-90
Description: 1X1 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: 1539.0 lumens
Efficiency: N/A
Efficacy: 71.2 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

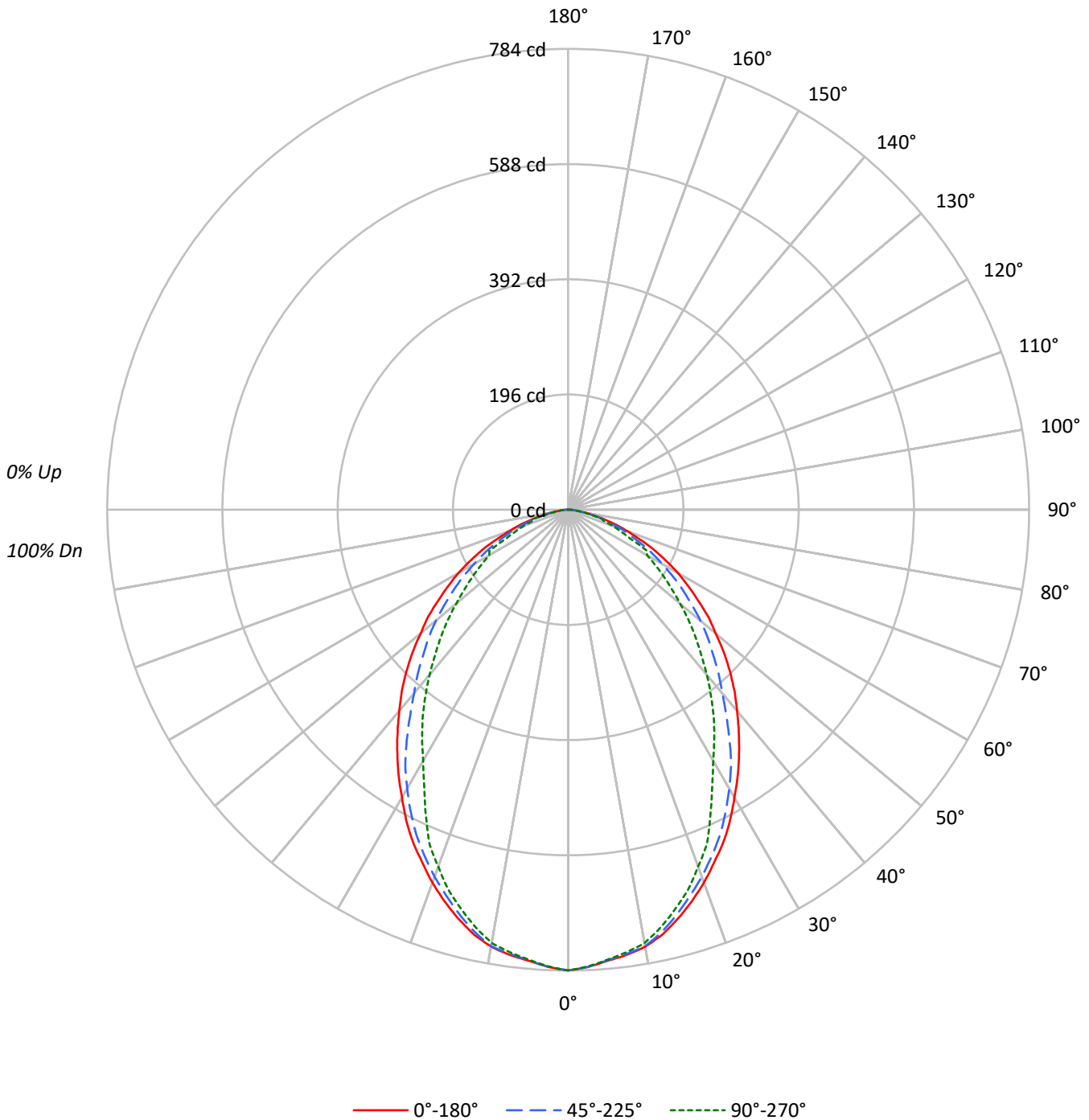
Input Watts (W): 21.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	8438	8438	8438
5°	8324	8313	8304
10°	8251	8241	8182
15°	8029	7949	7837
20°	7734	7609	7402
25°	7416	7254	6803
30°	7029	6804	6128
35°	6657	6288	5669
40°	6278	5730	5157
45°	5918	5297	4663
50°	5479	4917	4158
55°	5069	4455	3725
60°	4644	3980	3337
65°	4085	3487	2954
70°	3364	3053	2511
75°	2674	2337	2450
80°	1798	1686	1574
85°	1124	1346	1568

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5918 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	73.0	4.7
10°-20°	200.3	13.0
20°-30°	277.3	18.0
30°-40°	295.6	19.2
40°-50°	269.7	17.5
50°-60°	211.3	13.7
60°-70°	137.7	8.9
70°-80°	61.0	4.0
80°-90°	13.1	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°	550.5	35.8
0°-40°	846.2	55.0
0°-60°	1327.1	86.2
0°-90°	1539.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1539.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	784	784	784	784	784	
5°	770	769	769	768	768	73
15°	720	720	713	706	703	203
25°	624	621	611	589	573	287
35°	507	503	478	442	431	317
45°	389	381	348	319	306	299
55°	270	262	237	209	198	242
65°	160	151	137	140	116	158
75°	64	60	56	54	59	69
85°	9	10	11	12	13	13
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	783.9	783.9	783.9	783.9	783.9
2.5°	778.5	778.5	778.5	777.6	777.6
5°	770.4	769.4	769.4	768.5	768.5
7.5°	764.0	763.1	762.2	761.3	759.5
10°	754.9	754.9	754.0	749.5	748.6
12.5°	740.4	739.5	735.9	729.6	727.8
15°	720.5	720.5	713.3	706.0	703.3
17.5°	698.8	697.8	688.8	681.5	677.9
20°	675.2	673.4	664.3	652.5	646.2
22.5°	648.9	648.9	638.0	622.6	616.3
25°	624.4	620.8	610.8	589.1	572.8
27.5°	596.3	590.9	580.0	549.2	530.2
30°	565.5	562.8	547.4	507.5	493.0
32.5°	536.5	532.0	515.7	474.0	462.2
35°	506.6	503.0	478.5	442.3	431.4
37.5°	476.7	472.2	441.4	412.4	398.8
40°	446.8	441.4	407.8	381.6	367.0
42.5°	418.7	411.5	378.8	350.7	334.4
45°	388.8	380.6	348.0	319.0	306.3
47.5°	358.9	351.6	321.7	291.8	277.3
50°	327.2	320.8	293.6	263.7	248.3
52.5°	300.9	290.9	264.6	234.7	222.0
55°	270.1	261.9	237.4	209.4	198.5
57.5°	242.0	233.8	211.2	184.9	175.8
60°	215.7	203.9	184.9	162.2	155.0
62.5°	186.7	177.6	161.3	142.3	151.4
65°	160.4	151.4	136.9	139.6	116.0
67.5°	131.4	126.9	114.2	101.5	97.9
70°	106.9	101.5	97.0	83.4	79.8
72.5°	85.2	79.8	73.4	66.2	63.4
75°	64.3	59.8	56.2	53.5	58.9
77.5°	44.4	42.6	39.9	37.2	36.3
80°	29.0	28.1	27.2	26.3	25.4
82.5°	17.2	17.2	17.2	17.2	17.2
85°	9.1	10.0	10.9	11.8	12.7
87.5°	5.4	5.4	6.3	7.3	8.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)