

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: P559075

Luminaire Tested: FSR-12-1-LD4-2HI-35-UNV-93-85-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559075
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-35-UNV-93-85-EDD
Description: 1X1 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1896.0 lumens
Efficiency: N/A
Efficacy: 87.8 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

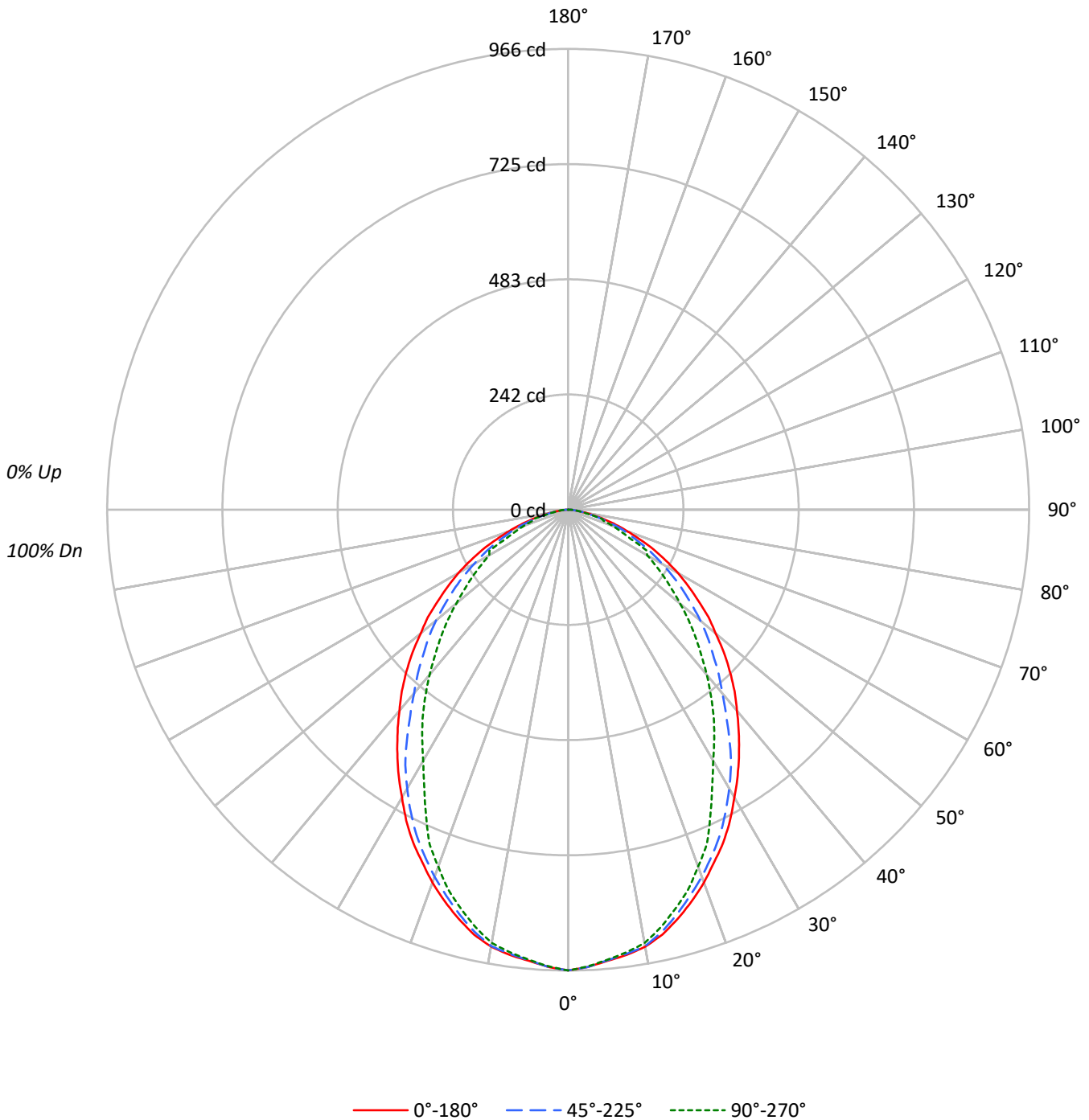
Input Watts (W): 21.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	10396	10396	10396
5°	10254	10242	10230
10°	10166	10154	10081
15°	9891	9792	9655
20°	9528	9375	9119
25°	9137	8937	8380
30°	8659	8382	7549
35°	8201	7746	6984
40°	7734	7059	6354
45°	7292	6526	5745
50°	6750	6059	5123
55°	6244	5489	4588
60°	5720	4904	4110
65°	5033	4294	3640
70°	4148	3761	3094
75°	3298	2878	3019
80°	2213	2077	1940
85°	1383	1655	1927

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7292 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	89.9	4.7
10°-20°	246.7	13.0
20°-30°	341.6	18.0
30°-40°	364.2	19.2
40°-50°	332.3	17.5
50°-60°	260.3	13.7
60°-70°	169.7	8.9
70°-80°	75.2	4.0
80°-90°	16.1	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°	678.2	35.8
0°-40°	1042.4	55.0
0°-60°	1635.0	86.2
0°-90°	1896.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1896.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	966	966	966	966	966	
5°	949	948	948	947	947	90
15°	888	888	879	870	866	250
25°	769	765	752	726	706	353
35°	624	620	590	545	532	390
45°	479	469	429	393	377	369
55°	333	323	292	258	244	298
65°	198	186	169	172	143	195
75°	79	74	69	66	73	85
85°	11	12	13	14	16	15
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	965.8	965.8	965.8	965.8	965.8
2.5°	959.1	959.1	959.1	958.0	958.0
5°	949.0	947.9	947.9	946.8	946.8
7.5°	941.2	940.1	939.0	937.9	935.7
10°	930.1	930.1	929.0	923.4	922.3
12.5°	912.2	911.1	906.6	898.8	896.6
15°	887.6	887.6	878.7	869.8	866.4
17.5°	860.8	859.7	848.6	839.6	835.2
20°	831.8	829.6	818.4	803.9	796.1
22.5°	799.4	799.4	786.0	767.1	759.2
25°	769.3	764.8	752.5	725.7	705.6
27.5°	734.7	728.0	714.6	676.6	653.2
30°	696.7	693.4	674.4	625.3	607.4
32.5°	661.0	655.4	635.3	583.9	569.4
35°	624.1	619.7	589.5	544.9	531.5
37.5°	587.3	581.7	543.7	508.0	491.3
40°	550.4	543.7	502.4	470.1	452.2
42.5°	515.8	506.9	466.7	432.1	412.0
45°	479.0	468.9	428.7	393.0	377.4
47.5°	442.1	433.2	396.4	359.5	341.7
50°	403.1	395.3	361.8	324.9	305.9
52.5°	370.7	358.4	326.0	289.2	273.5
55°	332.7	322.7	292.5	257.9	244.5
57.5°	298.1	288.1	260.2	227.8	216.6
60°	265.7	251.2	227.8	199.9	190.9
62.5°	230.0	218.8	198.7	175.3	186.5
65°	197.6	186.5	168.6	171.9	142.9
67.5°	161.9	156.3	140.7	125.1	120.6
70°	131.8	125.1	119.5	102.7	98.3
72.5°	105.0	98.3	90.4	81.5	78.2
75°	79.3	73.7	69.2	65.9	72.6
77.5°	54.7	52.5	49.1	45.8	44.7
80°	35.7	34.6	33.5	32.4	31.3
82.5°	21.2	21.2	21.2	21.2	21.2
85°	11.2	12.3	13.4	14.5	15.6
87.5°	6.7	6.7	7.8	8.9	10.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)