

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: P559528

Luminaire Tested: FSR-12-1-LD4-2STD-40-UNV-93-88-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559528
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-LD4-2STD-40-UNV-93-88-EDD-90
Description: 1X1 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1130.0 lumens
Efficiency: N/A
Efficacy: 68.1 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

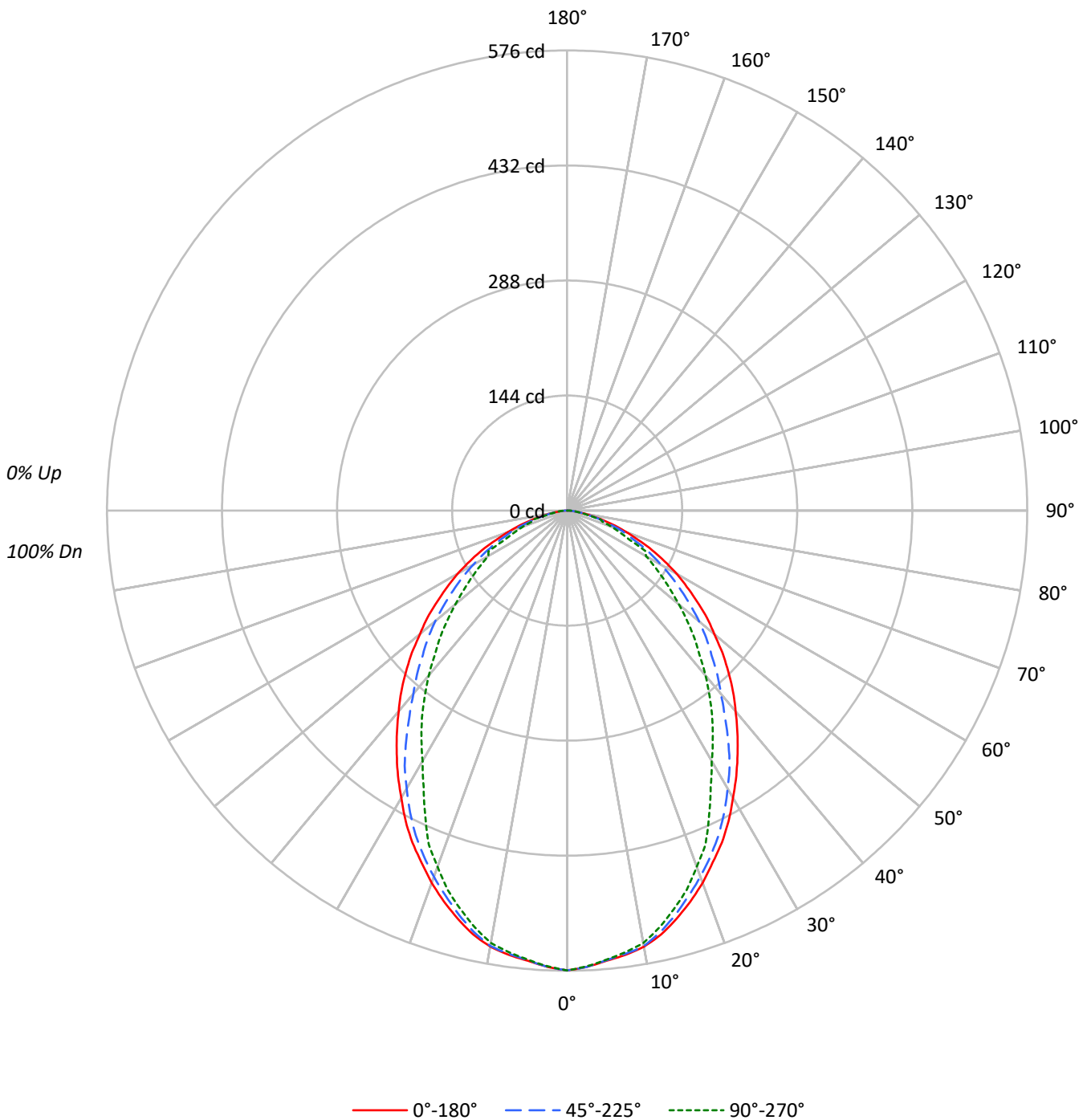
Input Watts (W): 16.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6196	6196	6196
5°	6111	6105	6097
10°	6058	6051	6008
15°	5895	5836	5755
20°	5679	5588	5435
25°	5445	5327	4995
30°	5161	4995	4499
35°	4888	4618	4163
40°	4610	4207	3787
45°	4346	3889	3424
50°	4022	3610	3053
55°	3721	3271	2734
60°	3410	2923	2450
65°	3000	2560	2170
70°	2471	2241	1844
75°	1963	1718	1801
80°	1320	1240	1153
85°	827	988	1149

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4346 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	53.6	4.7
10°-20°	147.0	13.0
20°-30°	203.6	18.0
30°-40°	217.1	19.2
40°-50°	198.0	17.5
50°-60°	155.1	13.7
60°-70°	101.1	8.9
70°-80°	44.8	4.0
80°-90°	9.6	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°	404.2	35.8
0°-40°	621.3	55.0
0°-60°	974.5	86.2
0°-90°	1130.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1130.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	576	576	576	576	576	
5°	566	565	565	564	564	54
15°	529	529	524	518	516	149
25°	458	456	448	432	421	211
35°	372	369	351	325	317	233
45°	286	280	256	234	225	220
55°	198	192	174	154	146	178
65°	118	111	100	102	85	116
75°	47	44	41	39	43	51
85°	7	7	8	9	9	9
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	575.6	575.6	575.6	575.6	575.6
2.5°	571.6	571.6	571.6	570.9	570.9
5°	565.6	565.0	565.0	564.3	564.3
7.5°	561.0	560.3	559.6	559.0	557.6
10°	554.3	554.3	553.6	550.3	549.7
12.5°	543.7	543.0	540.3	535.7	534.3
15°	529.0	529.0	523.7	518.4	516.4
17.5°	513.1	512.4	505.7	500.4	497.8
20°	495.8	494.4	487.8	479.1	474.5
22.5°	476.5	476.5	468.5	457.2	452.5
25°	458.5	455.8	448.5	432.5	420.6
27.5°	437.9	433.9	425.9	403.3	389.3
30°	415.2	413.2	401.9	372.6	362.0
32.5°	393.9	390.6	378.6	348.0	339.4
35°	372.0	369.3	351.4	324.7	316.8
37.5°	350.0	346.7	324.1	302.8	292.8
40°	328.1	324.1	299.4	280.2	269.5
42.5°	307.4	302.1	278.2	257.5	245.5
45°	285.5	279.5	255.5	234.2	224.9
47.5°	263.5	258.2	236.2	214.3	203.6
50°	240.2	235.6	215.6	193.6	182.3
52.5°	220.9	213.6	194.3	172.3	163.0
55°	198.3	192.3	174.3	153.7	145.7
57.5°	177.7	171.7	155.0	135.8	129.1
60°	158.4	149.7	135.8	119.1	113.8
62.5°	137.1	130.4	118.4	104.5	111.1
65°	117.8	111.1	100.5	102.5	85.2
67.5°	96.5	93.2	83.8	74.5	71.9
70°	78.5	74.5	71.2	61.2	58.6
72.5°	62.6	58.6	53.9	48.6	46.6
75°	47.2	43.9	41.3	39.3	43.3
77.5°	32.6	31.3	29.3	27.3	26.6
80°	21.3	20.6	20.0	19.3	18.6
82.5°	12.6	12.6	12.6	12.6	12.6
85°	6.7	7.3	8.0	8.7	9.3
87.5°	4.0	4.0	4.7	5.3	6.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)