

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: P560166

Luminaire Tested: FSR-12-2-LD4-1STD-50-UNV-93-87-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560166
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-LD4-1STD-50-UNV-93-87-EDD-90
Description: 1X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1281.0 lumens
Efficiency: N/A
Efficacy: 77.2 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

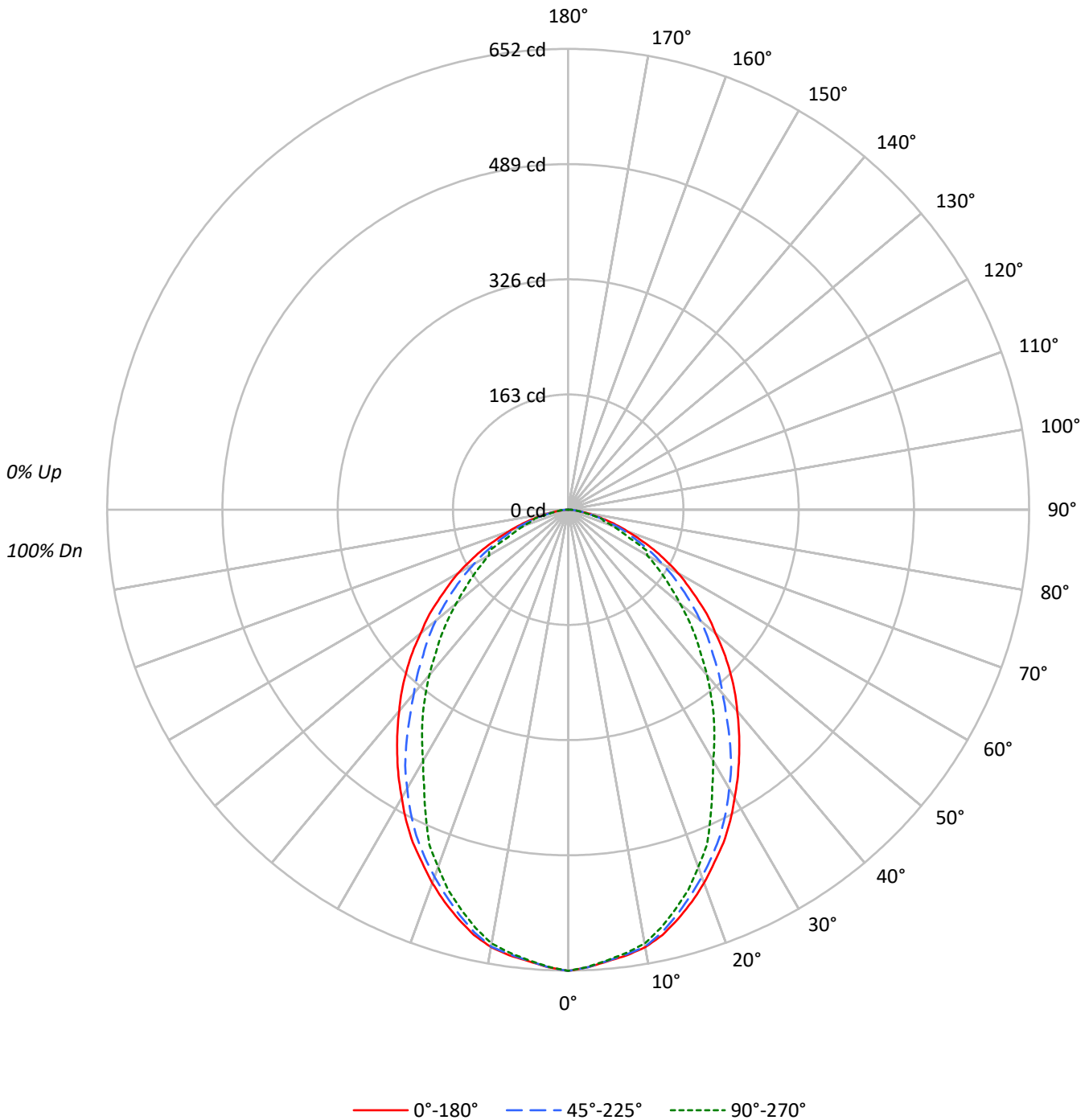
Input Watts (W): 16.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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				
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°	3512	3512	3512
5°	3464	3460	3456
10°	3434	3430	3405
15°	3341	3308	3262
20°	3219	3167	3081
25°	3087	3019	2831
30°	2925	2831	2550
35°	2771	2617	2359
40°	2613	2385	2146
45°	2463	2205	1941
50°	2280	2046	1731
55°	2109	1854	1550
60°	1932	1657	1389
65°	1700	1450	1230
70°	1400	1270	1045
75°	1115	973	1019
80°	747	700	654
85°	463	562	655

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2463 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	60.7	4.7
10°-20°	166.7	13.0
20°-30°	230.8	18.0
30°-40°	246.1	19.2
40°-50°	224.5	17.5
50°-60°	175.9	13.7
60°-70°	114.6	8.9
70°-80°	50.8	4.0
80°-90°	10.9	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°	458.2	35.8
0°-40°	704.3	55.0
0°-60°	1104.7	86.2
0°-90°	1281.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1281.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	652	652	652	652	652	
5°	641	640	640	640	640	61
15°	600	600	594	588	585	169
25°	520	517	508	490	477	239
35°	422	419	398	368	359	264
45°	324	317	290	266	255	249
55°	225	218	198	174	165	202
65°	134	126	114	116	97	132
75°	54	50	47	44	49	57
85°	8	8	9	10	11	10
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	652.5	652.5	652.5	652.5	652.5
2.5°	648.0	648.0	648.0	647.2	647.2
5°	641.2	640.5	640.5	639.7	639.7
7.5°	635.9	635.2	634.4	633.7	632.2
10°	628.4	628.4	627.6	623.9	623.1
12.5°	616.3	615.6	612.5	607.3	605.8
15°	599.7	599.7	593.7	587.6	585.4
17.5°	581.6	580.9	573.3	567.3	564.3
20°	562.0	560.5	552.9	543.1	537.9
22.5°	540.1	540.1	531.1	518.2	513.0
25°	519.8	516.7	508.4	490.3	476.8
27.5°	496.4	491.8	482.8	457.1	441.3
30°	470.7	468.5	455.6	422.4	410.4
32.5°	446.6	442.8	429.2	394.5	384.7
35°	421.7	418.7	398.3	368.1	359.1
37.5°	396.8	393.0	367.4	343.2	331.9
40°	371.9	367.4	339.5	317.6	305.5
42.5°	348.5	342.5	315.3	291.9	278.4
45°	323.6	316.8	289.7	265.5	255.0
47.5°	298.7	292.7	267.8	242.9	230.8
50°	272.3	267.0	244.4	219.5	206.7
52.5°	250.4	242.2	220.3	195.4	184.8
55°	224.8	218.0	197.6	174.3	165.2
57.5°	201.4	194.6	175.8	153.9	146.3
60°	179.5	169.7	153.9	135.0	129.0
62.5°	155.4	147.9	134.3	118.4	126.0
65°	133.5	126.0	113.9	116.2	96.6
67.5°	109.4	105.6	95.0	84.5	81.5
70°	89.0	84.5	80.7	69.4	66.4
72.5°	70.9	66.4	61.1	55.1	52.8
75°	53.6	49.8	46.8	44.5	49.0
77.5°	37.0	35.5	33.2	30.9	30.2
80°	24.1	23.4	22.6	21.9	21.1
82.5°	14.3	14.3	14.3	14.3	14.3
85°	7.5	8.3	9.1	9.8	10.6
87.5°	4.5	4.5	5.3	6.0	6.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)