

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: P564197

Luminaire Tested: FSR-24-4-LD4-4STD-50-UNV-93-86-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P564197
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-24-4-LD4-4STD-50-UNV-93-86-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 15568.0 lumens
Efficiency: N/A
Efficacy: 116.9 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

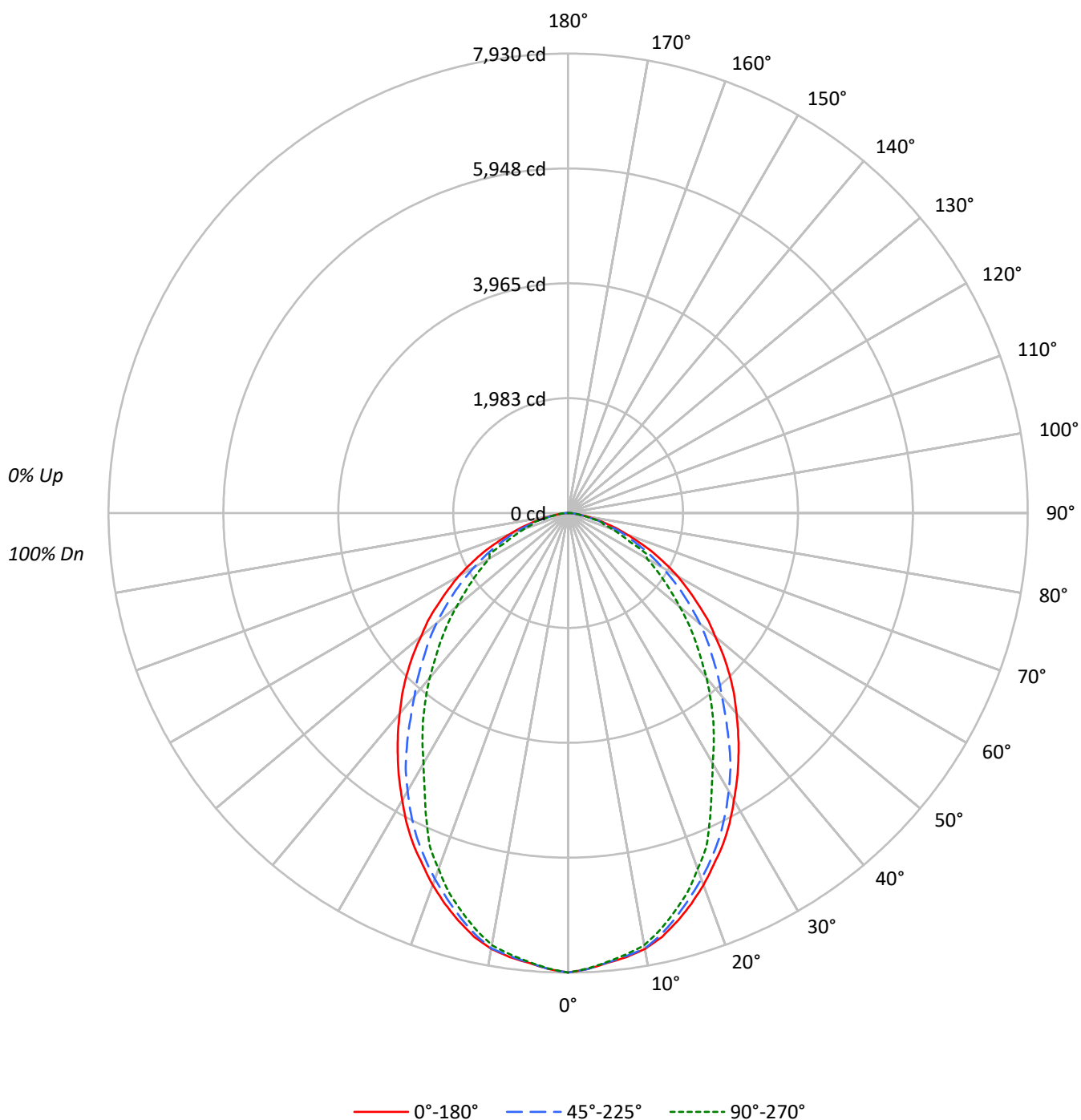
Input Watts (W): 133.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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
RW	70	50	30	10		70	50	30	10		50	30	10		50	30	10		50	30	10
RCR																					
0	119	119	119	119		116	116	116	116		111	111	111		106	106	106		102	102	102
1	110	106	102	99		108	104	100	97		100	97	94		96	94	91		92	90	89
2	101	94	88	83		99	92	87	82		89	84	80		86	82	78		83	79	77
3	93	84	77	71		91	82	76	70		79	74	69		77	72	68		74	70	67
4	86	75	67	61		84	74	66	61		72	65	60		69	64	59		67	62	58
5	80	68	60	54		78	67	59	53		65	58	53		63	57	52		61	56	52
6	74	62	53	48		72	61	53	47		59	52	47		57	51	47		56	50	46
7	69	56	48	43		67	56	48	42		54	47	42		53	46	42		51	46	42
8	65	52	44	38		63	51	44	38		50	43	38		49	42	38		48	42	38
9	61	48	40	35		59	47	40	35		46	39	35		45	39	34		44	38	34
10	57	44	37	32		56	44	37	32		43	36	32		42	36	32		41	36	32

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10670	10670	10670
5°	10525	10512	10500
10°	10434	10421	10346
15°	10152	10050	9910
20°	9779	9622	9359
25°	9378	9173	8602
30°	8888	8603	7748
35°	8418	7951	7168
40°	7938	7246	6522
45°	7484	6699	5896
50°	6928	6218	5258
55°	6409	5635	4710
60°	5871	5033	4219
65°	5166	4407	3736
70°	4256	3859	3174
75°	3384	2955	3098
80°	2273	2131	1989
85°	1416	1698	1981

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 7484 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	738.2	4.7
10°-20°	2025.9	13.0
20°-30°	2804.7	18.0
30°-40°	2990.6	19.2
40°-50°	2728.3	17.5
50°-60°	2137.4	13.7
60°-70°	1393.1	8.9
70°-80°	617.2	4.0
80°-90°	132.5	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°	5568.8	35.8
0°-40°	8559.4	55.0
0°-60°	13425.2	86.2
0°-90°	15568.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	15568.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	7930	7930	7930	7930	7930	
5°	7793	7783	7783	7774	7774	740
15°	7288	7288	7215	7142	7114	2049
25°	6317	6280	6179	5959	5794	2900
35°	5125	5088	4841	4474	4364	3204
45°	3933	3850	3520	3227	3099	3030
55°	2732	2650	2402	2118	2008	2450
65°	1623	1531	1384	1412	1174	1599
75°	651	605	568	541	596	698
85°	92	101	110	119	128	127
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	7930.1	7930.1	7930.1	7930.1	7930.1
2.5°	7875.1	7875.1	7875.1	7866.0	7866.0
5°	7792.6	7783.4	7783.4	7774.3	7774.3
7.5°	7728.4	7719.3	7710.1	7700.9	7682.6
10°	7636.8	7636.8	7627.6	7581.8	7572.6
12.5°	7490.1	7480.9	7444.2	7380.1	7361.7
15°	7288.4	7288.4	7215.0	7141.7	7114.2
17.5°	7068.4	7059.2	6967.5	6894.2	6857.5
20°	6830.0	6811.7	6720.0	6600.8	6536.6
22.5°	6564.1	6564.1	6454.1	6298.3	6234.1
25°	6316.6	6279.9	6179.1	5959.1	5794.0
27.5°	6032.4	5977.4	5867.4	5555.7	5363.2
30°	5720.7	5693.2	5537.3	5134.0	4987.3
32.5°	5427.3	5381.5	5216.5	4794.7	4675.6
35°	5124.8	5088.1	4840.6	4473.9	4363.9
37.5°	4822.3	4776.4	4464.7	4171.3	4033.8
40°	4519.7	4464.7	4125.5	3859.6	3713.0
42.5°	4235.5	4162.2	3832.1	3547.9	3382.9
45°	3933.0	3850.5	3520.4	3227.1	3098.7
47.5°	3630.4	3557.1	3254.6	2952.0	2805.3
50°	3309.6	3245.4	2970.4	2667.8	2512.0
52.5°	3043.7	2942.9	2677.0	2374.5	2246.1
55°	2732.0	2649.5	2402.0	2117.8	2007.7
57.5°	2447.8	2365.3	2136.1	1870.2	1778.5
60°	2181.9	2062.8	1870.2	1641.0	1567.7
62.5°	1888.6	1796.9	1631.9	1439.3	1531.0
65°	1622.7	1531.0	1384.3	1411.8	1173.5
67.5°	1329.3	1283.5	1155.1	1026.8	990.1
70°	1081.8	1026.8	981.0	843.4	806.8
72.5°	861.8	806.8	742.6	669.2	641.7
75°	650.9	605.1	568.4	540.9	595.9
77.5°	449.2	430.9	403.4	375.9	366.7
80°	293.4	284.2	275.0	265.9	256.7
82.5°	174.2	174.2	174.2	174.2	174.2
85°	91.7	100.8	110.0	119.2	128.3
87.5°	55.0	55.0	64.2	73.3	82.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)