

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: P563419

Luminaire Tested: FSR-24-4-LD4-3LO-50-UNV-82-94-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563419
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-LD4-3LO-50-UNV-82-94-EDD
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8370.0 lumens
Efficiency: N/A
Efficacy: 119.2 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

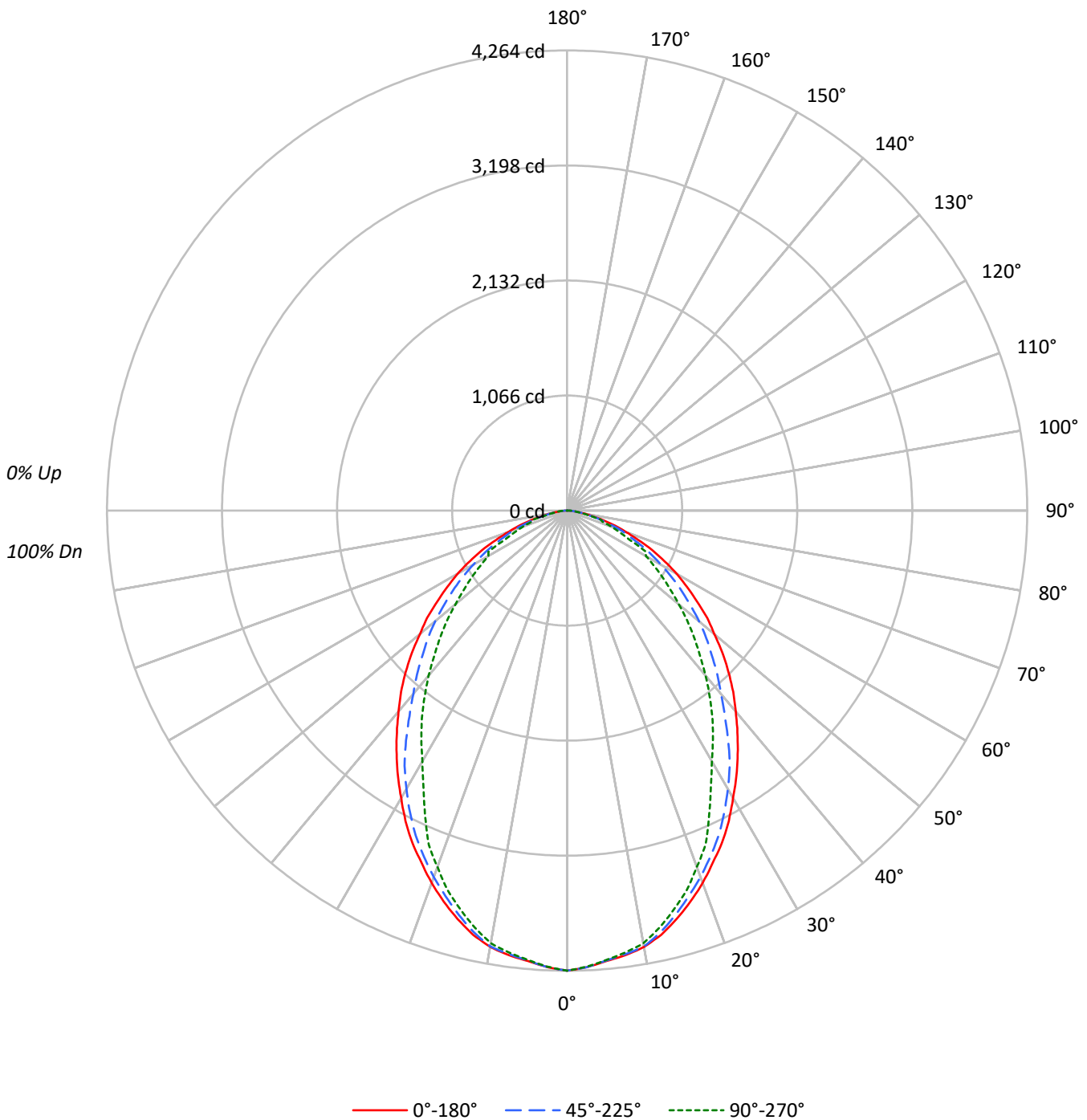
Input Watts (W): 70.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	0
RW	70	50	30	10	70	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
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°	5737	5737	5737
5°	5659	5652	5645
10°	5610	5603	5562
15°	5458	5403	5328
20°	5258	5173	5032
25°	5042	4932	4625
30°	4779	4625	4166
35°	4526	4275	3854
40°	4268	3896	3506
45°	4023	3601	3170
50°	3725	3343	2827
55°	3445	3029	2532
60°	3157	2706	2268
65°	2777	2370	2009
70°	2288	2075	1707
75°	1820	1589	1666
80°	1222	1146	1069
85°	761	912	1065

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4023 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	396.9	4.7
10°-20°	1089.2	13.0
20°-30°	1507.9	18.0
30°-40°	1607.9	19.2
40°-50°	1466.9	17.5
50°-60°	1149.2	13.7
60°-70°	749.0	8.9
70°-80°	331.8	4.0
80°-90°	71.3	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°	2994.0	35.8
0°-40°	4601.9	55.0
0°-60°	7218.0	86.2
0°-90°	8370.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8370.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4264	4264	4264	4264	4264	
5°	4190	4185	4185	4180	4180	398
15°	3918	3918	3879	3840	3825	1102
25°	3396	3376	3322	3204	3115	1559
35°	2755	2736	2602	2405	2346	1723
45°	2114	2070	1893	1735	1666	1629
55°	1469	1424	1291	1139	1079	1317
65°	872	823	744	759	631	860
75°	350	325	306	291	320	375
85°	49	54	59	64	69	68
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4263.6	4263.6	4263.6	4263.6	4263.6
2.5°	4234.0	4234.0	4234.0	4229.1	4229.1
5°	4189.6	4184.7	4184.7	4179.8	4179.8
7.5°	4155.1	4150.2	4145.3	4140.3	4130.5
10°	4105.8	4105.8	4100.9	4076.3	4071.3
12.5°	4027.0	4022.0	4002.3	3967.8	3958.0
15°	3918.5	3918.5	3879.1	3839.7	3824.9
17.5°	3800.2	3795.3	3746.0	3706.6	3686.9
20°	3672.1	3662.2	3612.9	3548.9	3514.4
22.5°	3529.1	3529.1	3470.0	3386.2	3351.7
25°	3396.1	3376.4	3322.1	3203.8	3115.1
27.5°	3243.3	3213.7	3154.5	2987.0	2883.5
30°	3075.7	3060.9	2977.1	2760.2	2681.4
32.5°	2918.0	2893.3	2804.6	2577.9	2513.8
35°	2755.3	2735.6	2602.5	2405.3	2346.2
37.5°	2592.6	2568.0	2400.4	2242.7	2168.8
40°	2430.0	2400.4	2218.0	2075.1	1996.2
42.5°	2277.2	2237.8	2060.3	1907.5	1818.8
45°	2114.5	2070.2	1892.7	1735.0	1666.0
47.5°	1951.9	1912.4	1749.8	1587.1	1508.3
50°	1779.4	1744.9	1597.0	1434.3	1350.5
52.5°	1636.4	1582.2	1439.3	1276.6	1207.6
55°	1468.8	1424.5	1291.4	1138.6	1079.4
57.5°	1316.0	1271.7	1148.5	1005.5	956.2
60°	1173.1	1109.0	1005.5	882.3	842.9
62.5°	1015.4	966.1	877.4	773.8	823.1
65°	872.4	823.1	744.3	759.1	630.9
67.5°	714.7	690.1	621.1	552.0	532.3
70°	581.6	552.0	527.4	453.5	433.8
72.5°	463.3	433.8	399.2	359.8	345.0
75°	350.0	325.3	305.6	290.8	320.4
77.5°	241.5	231.7	216.9	202.1	197.2
80°	157.7	152.8	147.9	142.9	138.0
82.5°	93.7	93.7	93.7	93.7	93.7
85°	49.3	54.2	59.1	64.1	69.0
87.5°	29.6	29.6	34.5	39.4	44.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)