

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: P563378

Luminaire Tested: FSR-24-4-LD4-3LO-50-UNV-80-85-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563378
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-80-85-EDD-90
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR PC ENVIRON
SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7657.0 lumens
Efficiency: N/A
Efficacy: 109.1 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

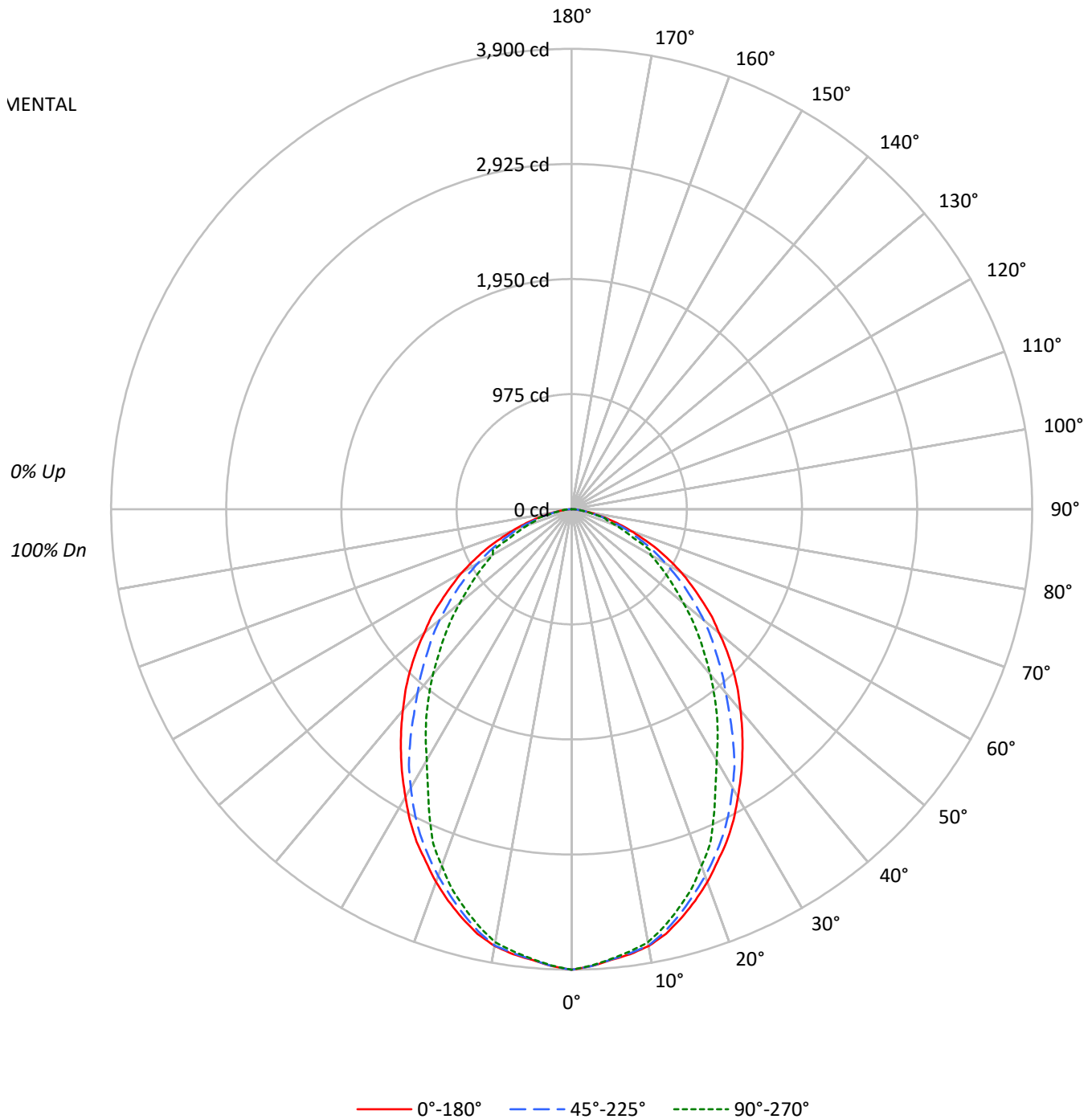
Input Watts (W): 70.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	5248	5248	5248
5°	5177	5170	5164
10°	5132	5126	5089
15°	4993	4943	4874
20°	4810	4733	4603
25°	4612	4512	4231
30°	4371	4231	3811
35°	4140	3911	3525
40°	3905	3564	3208
45°	3681	3295	2900
50°	3407	3058	2586
55°	3152	2771	2316
60°	2888	2475	2075
65°	2541	2168	1838
70°	2093	1898	1561
75°	1664	1454	1524
80°	1118	1048	979
85°	696	835	974

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3681 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	363.1	4.7
10°-20°	996.4	13.0
20°-30°	1379.5	18.0
30°-40°	1470.9	19.2
40°-50°	1341.9	17.5
50°-60°	1051.3	13.7
60°-70°	685.2	8.9
70°-80°	303.6	4.0
80°-90°	65.2	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°	2739.0	35.8
0°-40°	4209.9	55.0
0°-60°	6603.1	86.2
0°-90°	7657.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7657.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3900	3900	3900	3900	3900	
5°	3833	3828	3828	3824	3824	364
15°	3585	3585	3549	3513	3499	1008
25°	3107	3089	3039	2931	2850	1426
35°	2521	2503	2381	2200	2146	1576
45°	1934	1894	1732	1587	1524	1490
55°	1344	1303	1181	1042	988	1205
65°	798	753	681	694	577	787
75°	320	298	280	266	293	343
85°	45	50	54	59	63	63
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3900.4	3900.4	3900.4	3900.4	3900.4
2.5°	3873.3	3873.3	3873.3	3868.8	3868.8
5°	3832.7	3828.2	3828.2	3823.7	3823.7
7.5°	3801.2	3796.7	3792.2	3787.6	3778.6
10°	3756.1	3756.1	3751.6	3729.0	3724.5
12.5°	3683.9	3679.4	3661.4	3629.8	3620.8
15°	3584.7	3584.7	3548.7	3512.6	3499.1
17.5°	3476.5	3472.0	3426.9	3390.8	3372.8
20°	3359.3	3350.3	3305.2	3246.6	3215.0
22.5°	3228.5	3228.5	3174.4	3097.8	3066.2
25°	3106.8	3088.7	3039.1	2930.9	2849.8
27.5°	2967.0	2939.9	2885.8	2732.5	2637.8
30°	2813.7	2800.2	2723.5	2525.1	2453.0
32.5°	2669.4	2646.8	2565.7	2358.3	2299.6
35°	2520.6	2502.6	2380.8	2200.4	2146.3
37.5°	2371.8	2349.2	2195.9	2051.6	1984.0
40°	2223.0	2195.9	2029.1	1898.3	1826.2
42.5°	2083.2	2047.1	1884.8	1745.0	1663.9
45°	1934.4	1893.8	1731.5	1587.2	1524.1
47.5°	1785.6	1749.5	1600.7	1451.9	1379.8
50°	1627.8	1596.2	1460.9	1312.1	1235.5
52.5°	1497.0	1447.4	1316.7	1167.9	1104.7
55°	1343.7	1303.1	1181.4	1041.6	987.5
57.5°	1203.9	1163.3	1050.6	919.9	874.8
60°	1073.2	1014.5	919.9	807.1	771.1
62.5°	928.9	883.8	802.6	707.9	753.0
65°	798.1	753.0	680.9	694.4	577.2
67.5°	653.8	631.3	568.1	505.0	487.0
70°	532.1	505.0	482.5	414.8	396.8
72.5°	423.9	396.8	365.2	329.2	315.6
75°	320.1	297.6	279.6	266.0	293.1
77.5°	220.9	211.9	198.4	184.9	180.4
80°	144.3	139.8	135.3	130.8	126.3
82.5°	85.7	85.7	85.7	85.7	85.7
85°	45.1	49.6	54.1	58.6	63.1
87.5°	27.1	27.1	31.6	36.1	40.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)