

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: P563639

Luminaire Tested: FSR-24-4-LD4-4HI-35-UNV-80-87-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563639
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-LD4-4HI-35-UNV-80-87-EDD
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR PC ENVIRON
SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 17952.0 lumens
Efficiency: N/A
Efficacy: 103.9 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

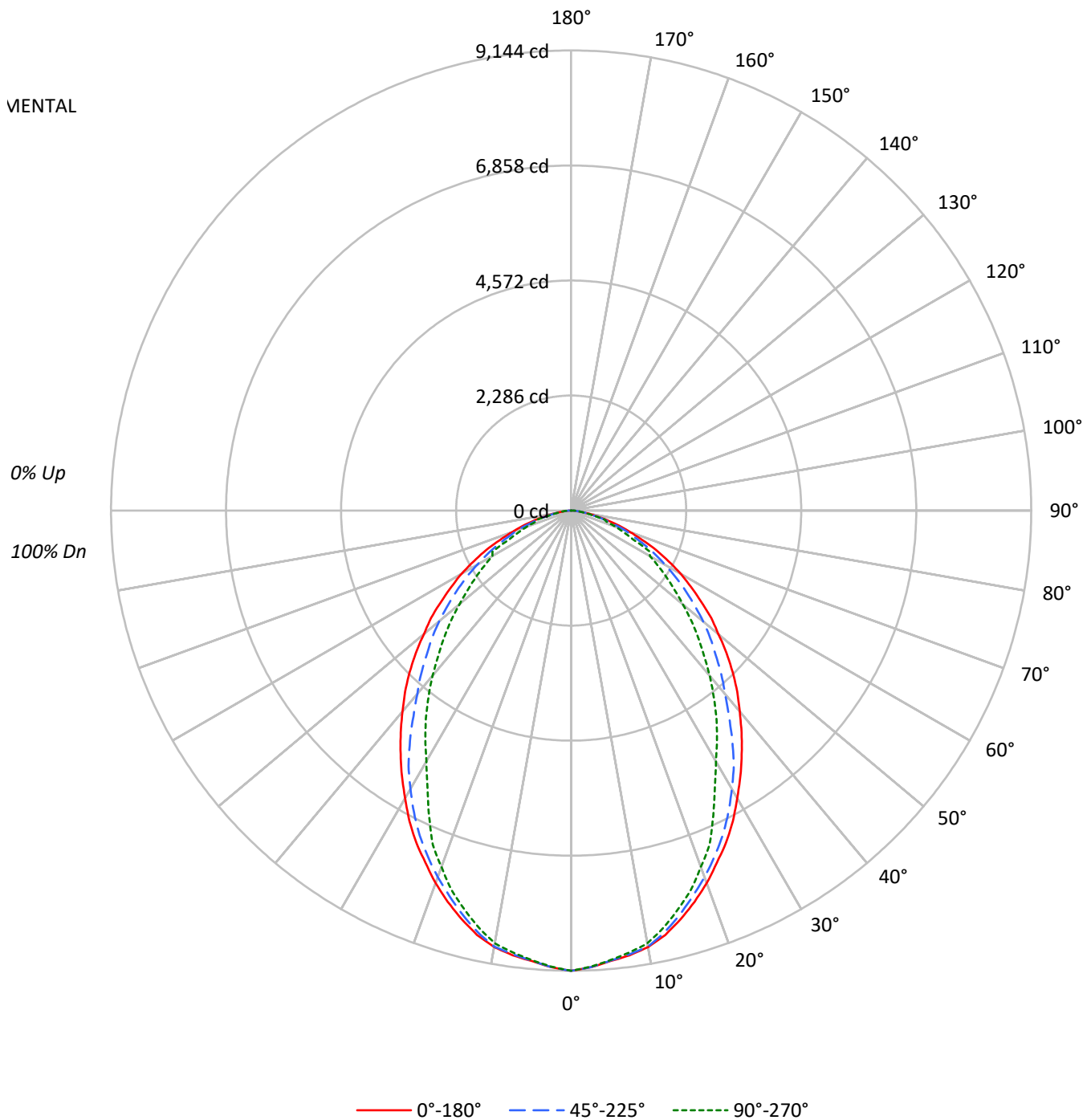
Input Watts (W): 172.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20																		
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	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°	12304	12304	12304
5°	12137	12122	12108
10°	12031	12017	11930
15°	11707	11589	11427
20°	11277	11095	10793
25°	10814	10578	9919
30°	10249	9920	8935
35°	9707	9168	8265
40°	9154	8356	7520
45°	8630	7724	6799
50°	7989	7170	6063
55°	7390	6497	5431
60°	6771	5803	4865
65°	5957	5082	4308
70°	4908	4450	3660
75°	3902	3407	3572
80°	2621	2458	2294
85°	1632	1959	2285

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 8630 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	851.2	4.7
10°-20°	2336.1	13.0
20°-30°	3234.2	18.0
30°-40°	3448.6	19.2
40°-50°	3146.1	17.5
50°-60°	2464.8	13.7
60°-70°	1606.4	8.9
70°-80°	711.7	4.0
80°-90°	152.8	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°	6421.6	35.8
0°-40°	9870.2	55.0
0°-60°	15481.1	86.2
0°-90°	17952.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	17952.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	9144	9144	9144	9144	9144	
5°	8986	8975	8975	8965	8965	853
15°	8404	8404	8320	8235	8204	2363
25°	7284	7242	7125	6872	6681	3344
35°	5910	5867	5582	5159	5032	3695
45°	4535	4440	4060	3721	3573	3493
55°	3150	3055	2770	2442	2315	2826
65°	1871	1766	1596	1628	1353	1844
75°	751	698	655	624	687	804
85°	106	116	127	137	148	147
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	9144.5	9144.5	9144.5	9144.5	9144.5
2.5°	9081.1	9081.1	9081.1	9070.5	9070.5
5°	8985.9	8975.4	8975.4	8964.8	8964.8
7.5°	8911.9	8901.4	8890.8	8880.2	8859.1
10°	8806.2	8806.2	8795.6	8742.8	8732.2
12.5°	8637.1	8626.5	8584.2	8510.2	8489.1
15°	8404.5	8404.5	8319.9	8235.3	8203.6
17.5°	8150.8	8140.2	8034.5	7949.9	7907.6
20°	7875.9	7854.8	7749.0	7611.6	7537.6
22.5°	7569.3	7569.3	7442.5	7262.7	7188.7
25°	7283.9	7241.6	7125.3	6871.6	6681.3
27.5°	6956.2	6892.7	6765.9	6406.4	6184.4
30°	6596.7	6565.0	6385.3	5920.1	5751.0
32.5°	6258.4	6205.6	6015.3	5529.0	5391.6
35°	5909.6	5867.3	5581.9	5159.0	5032.1
37.5°	5560.7	5507.8	5148.4	4810.1	4651.5
40°	5211.8	5148.4	4757.3	4450.7	4281.5
42.5°	4884.1	4799.5	4419.0	4091.2	3901.0
45°	4535.3	4440.1	4059.5	3721.2	3573.2
47.5°	4186.4	4101.8	3752.9	3404.1	3234.9
50°	3816.4	3742.4	3425.2	3076.4	2896.6
52.5°	3509.8	3393.5	3086.9	2738.1	2590.1
55°	3150.4	3055.2	2769.8	2442.1	2315.2
57.5°	2822.6	2727.5	2463.2	2156.6	2050.9
60°	2516.1	2378.6	2156.6	1892.3	1807.8
62.5°	2177.8	2072.1	1881.8	1659.8	1765.5
65°	1871.2	1765.5	1596.3	1628.0	1353.2
67.5°	1532.9	1480.0	1332.0	1184.0	1141.7
70°	1247.5	1184.0	1131.2	972.6	930.3
72.5°	993.7	930.3	856.3	771.7	740.0
75°	750.6	697.7	655.4	623.7	687.2
77.5°	518.0	496.9	465.2	433.4	422.9
80°	338.3	327.7	317.2	306.6	296.0
82.5°	200.9	200.9	200.9	200.9	200.9
85°	105.7	116.3	126.9	137.4	148.0
87.5°	63.4	63.4	74.0	84.6	95.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)