

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: P563191

Luminaire Tested: FSR-24-4-LD4-3HI-50-UNV-80-87-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563191
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-LD4-3HI-50-UNV-80-87-EDD
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR PC ENVIRONM
SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 13830.0 lumens
Efficiency: N/A
Efficacy: 106.7 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

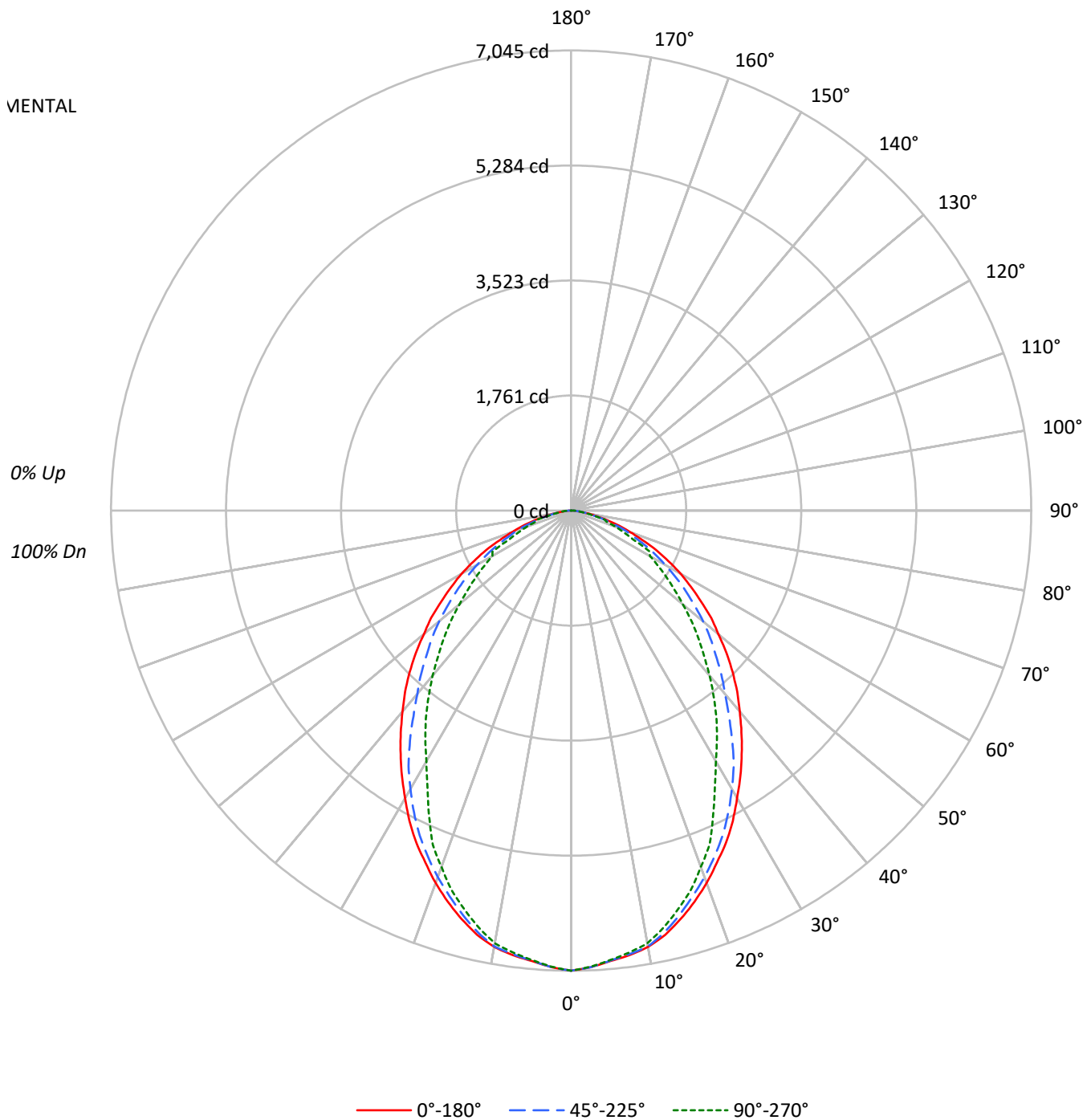
Input Watts (W): 129.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	9479	9479	9479
5°	9350	9339	9328
10°	9269	9258	9191
15°	9019	8928	8803
20°	8688	8548	8315
25°	8331	8149	7641
30°	7896	7643	6883
35°	7478	7063	6368
40°	7052	6437	5793
45°	6648	5951	5238
50°	6154	5524	4671
55°	5693	5005	4184
60°	5216	4471	3748
65°	4589	3915	3319
70°	3781	3428	2819
75°	3006	2625	2752
80°	2019	1893	1767
85°	1257	1508	1760

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6648 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	655.8	4.7
10°-20°	1799.7	13.0
20°-30°	2491.6	18.0
30°-40°	2656.8	19.2
40°-50°	2423.7	17.5
50°-60°	1898.8	13.7
60°-70°	1237.6	8.9
70°-80°	548.3	4.0
80°-90°	117.7	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°	4947.1	35.8
0°-40°	7603.9	55.0
0°-60°	11926.4	86.2
0°-90°	13830.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	13830.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	7045	7045	7045	7045	7045	
5°	6923	6914	6914	6906	6906	657
15°	6475	6475	6410	6344	6320	1820
25°	5611	5579	5489	5294	5147	2576
35°	4553	4520	4300	3974	3877	2846
45°	3494	3421	3127	2867	2753	2691
55°	2427	2354	2134	1881	1784	2177
65°	1442	1360	1230	1254	1042	1421
75°	578	538	505	480	529	620
85°	81	90	98	106	114	113
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	7044.8	7044.8	7044.8	7044.8	7044.8
2.5°	6996.0	6996.0	6996.0	6987.8	6987.8
5°	6922.7	6914.5	6914.5	6906.4	6906.4
7.5°	6865.6	6857.5	6849.4	6841.2	6824.9
10°	6784.2	6784.2	6776.1	6735.3	6727.2
12.5°	6653.9	6645.7	6613.2	6556.2	6539.9
15°	6474.7	6474.7	6409.6	6344.4	6320.0
17.5°	6279.3	6271.1	6189.7	6124.5	6091.9
20°	6067.5	6051.2	5969.8	5863.9	5806.9
22.5°	5831.3	5831.3	5733.6	5595.1	5538.1
25°	5611.4	5578.8	5489.3	5293.8	5147.2
27.5°	5358.9	5310.1	5212.4	4935.4	4764.4
30°	5082.0	5057.6	4919.2	4560.8	4430.5
32.5°	4821.4	4780.7	4634.1	4259.5	4153.6
35°	4552.7	4520.1	4300.2	3974.4	3876.7
37.5°	4283.9	4243.2	3966.3	3705.7	3583.5
40°	4015.1	3966.3	3664.9	3428.7	3298.4
42.5°	3762.7	3697.5	3404.3	3151.8	3005.2
45°	3493.9	3420.6	3127.4	2866.8	2752.8
47.5°	3225.1	3160.0	2891.2	2622.5	2492.2
50°	2940.1	2883.1	2638.8	2370.0	2231.5
52.5°	2703.9	2614.3	2378.1	2109.4	1995.4
55°	2427.0	2353.7	2133.8	1881.3	1783.6
57.5°	2174.5	2101.2	1897.6	1661.4	1580.0
60°	1938.3	1832.5	1661.4	1457.8	1392.7
62.5°	1677.7	1596.3	1449.7	1278.7	1360.1
65°	1441.5	1360.1	1229.8	1254.2	1042.5
67.5°	1180.9	1140.2	1026.2	912.2	879.6
70°	961.0	912.2	871.4	749.3	716.7
72.5°	765.6	716.7	659.7	594.5	570.1
75°	578.2	537.5	504.9	480.5	529.4
77.5°	399.1	382.8	358.3	333.9	325.8
80°	260.6	252.5	244.3	236.2	228.0
82.5°	154.7	154.7	154.7	154.7	154.7
85°	81.4	89.6	97.7	105.9	114.0
87.5°	48.9	48.9	57.0	65.2	73.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)