

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: P563764

Luminaire Tested: FSR-24-4-LD4-4HI-50-UNV-80-86-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563764
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-50-UNV-80-86-EDD-90
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR PC ENVIRON
SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 16580.0 lumens
Efficiency: N/A
Efficacy: 95.9 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

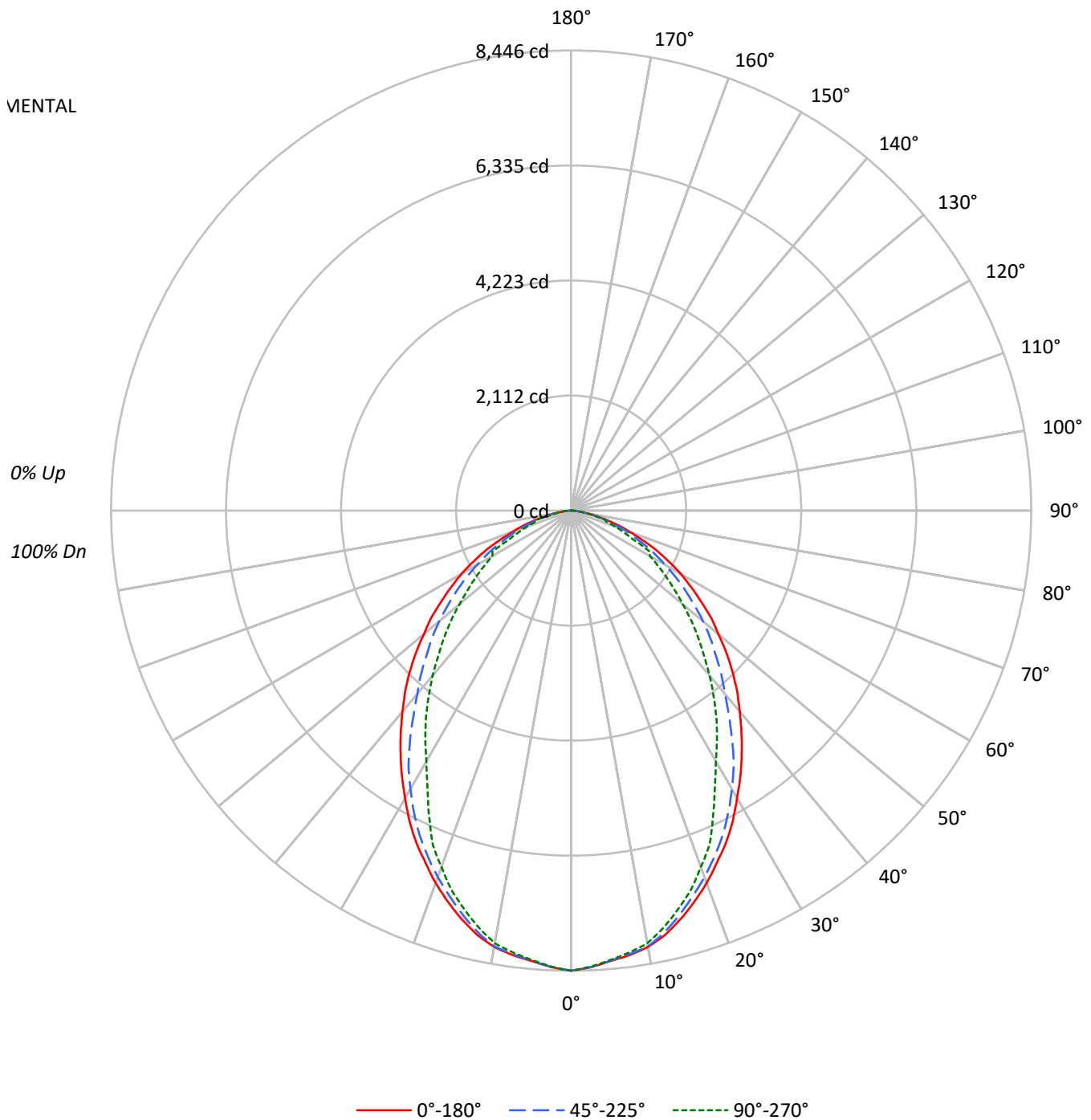
Input Watts (W): 172.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					20					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	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				
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°	11363	11363	11363
5°	11209	11196	11183
10°	11112	11099	11018
15°	10812	10704	10554
20°	10415	10247	9968
25°	9987	9770	9161
30°	9466	9162	8252
35°	8965	8468	7634
40°	8454	7717	6945
45°	7970	7134	6279
50°	7378	6622	5600
55°	6825	6001	5016
60°	6253	5360	4493
65°	5502	4694	3979
70°	4532	4110	3380
75°	3604	3147	3299
80°	2421	2269	2118
85°	1507	1809	2110

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7970 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	786.2	4.7
10°-20°	2157.6	13.0
20°-30°	2987.0	18.0
30°-40°	3185.0	19.2
40°-50°	2905.7	17.5
50°-60°	2276.4	13.7
60°-70°	1483.6	8.9
70°-80°	657.3	4.0
80°-90°	141.1	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°	5930.8	35.8
0°-40°	9115.9	55.0
0°-60°	14297.9	86.2
0°-90°	16580.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	16580.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	8446	8446	8446	8446	8446	
5°	8299	8289	8289	8280	8280	788
15°	7762	7762	7684	7606	7577	2182
25°	6727	6688	6581	6346	6171	3088
35°	5458	5419	5155	4765	4648	3412
45°	4189	4101	3749	3437	3300	3226
55°	2910	2822	2558	2255	2138	2610
65°	1728	1630	1474	1504	1250	1703
75°	693	644	605	576	635	743
85°	98	107	117	127	137	135
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	8445.6	8445.6	8445.6	8445.6	8445.6
2.5°	8387.0	8387.0	8387.0	8377.3	8377.3
5°	8299.2	8289.4	8289.4	8279.6	8279.6
7.5°	8230.8	8221.1	8211.3	8201.5	8182.0
10°	8133.2	8133.2	8123.4	8074.6	8064.8
12.5°	7977.0	7967.2	7928.2	7859.8	7840.3
15°	7762.2	7762.2	7684.1	7605.9	7576.7
17.5°	7527.8	7518.1	7420.4	7342.3	7303.3
20°	7274.0	7254.5	7156.8	7029.9	6961.5
22.5°	6990.8	6990.8	6873.7	6707.7	6639.3
25°	6727.2	6688.2	6580.8	6346.4	6170.7
27.5°	6424.5	6366.0	6248.8	5916.8	5711.8
30°	6092.6	6063.3	5897.3	5467.7	5311.5
32.5°	5780.1	5731.3	5555.6	5106.4	4979.5
35°	5457.9	5418.9	5155.3	4764.7	4647.5
37.5°	5135.7	5086.9	4754.9	4442.5	4296.0
40°	4813.5	4754.9	4393.7	4110.5	3954.3
42.5°	4510.8	4432.7	4081.2	3778.6	3602.8
45°	4188.6	4100.8	3749.3	3436.8	3300.1
47.5°	3866.4	3788.3	3466.1	3143.9	2987.7
50°	3524.7	3456.4	3163.5	2841.2	2675.3
52.5°	3241.6	3134.2	2851.0	2528.8	2392.1
55°	2909.6	2821.7	2558.1	2255.4	2138.3
57.5°	2606.9	2519.0	2275.0	1991.8	1894.2
60°	2323.8	2196.8	1991.8	1747.7	1669.6
62.5°	2011.3	1913.7	1737.9	1532.9	1630.5
65°	1728.2	1630.5	1474.3	1503.6	1249.8
67.5°	1415.7	1366.9	1230.2	1093.5	1054.5
70°	1152.1	1093.5	1044.7	898.3	859.2
72.5°	917.8	859.2	790.9	712.8	683.5
75°	693.2	644.4	605.4	576.1	634.6
77.5°	478.4	458.9	429.6	400.3	390.5
80°	312.4	302.7	292.9	283.1	273.4
82.5°	185.5	185.5	185.5	185.5	185.5
85°	97.6	107.4	117.2	126.9	136.7
87.5°	58.6	58.6	68.3	78.1	87.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)