

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: P564083

Luminaire Tested: FSR-24-4-LD4-4STD-40-UNV-80-85-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P564083
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-LD4-4STD-40-UNV-80-85-EDD
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR PC ENVIRON
SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 15452.9 lumens
Efficiency: N/A
Efficacy: 116.0 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

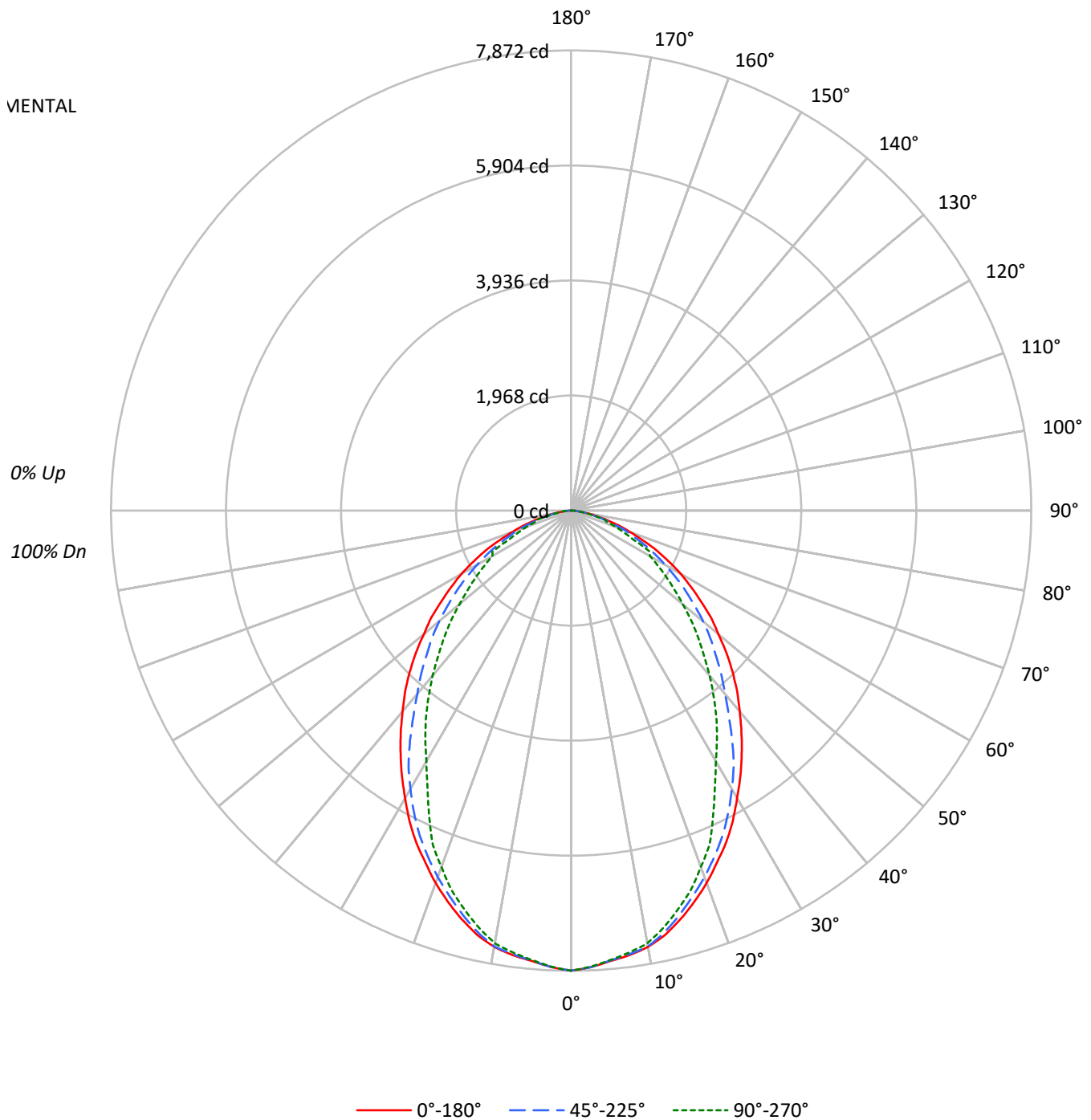
Input Watts (W): 133.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	10591	10591	10591
5°	10447	10435	10423
10°	10357	10344	10270
15°	10077	9976	9836
20°	9707	9551	9290
25°	9308	9106	8538
30°	8822	8539	7691
35°	8355	7892	7115
40°	7880	7193	6473
45°	7428	6649	5853
50°	6876	6172	5219
55°	6361	5593	4675
60°	5828	4996	4187
65°	5128	4375	3708
70°	4224	3830	3150
75°	3359	2933	3075
80°	2256	2115	1974
85°	1405	1686	1967

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7428 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	732.7	4.7
10°-20°	2010.9	13.0
20°-30°	2784.0	18.0
30°-40°	2968.5	19.2
40°-50°	2708.2	17.5
50°-60°	2121.6	13.7
60°-70°	1382.8	8.9
70°-80°	612.6	4.0
80°-90°	131.5	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°	5527.6	35.8
0°-40°	8496.2	55.0
0°-60°	13326.0	86.2
0°-90°	15452.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	15452.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	7872	7872	7872	7872	7872	
5°	7735	7726	7726	7717	7717	734
15°	7234	7234	7162	7089	7062	2034
25°	6270	6234	6133	5915	5751	2879
35°	5087	5050	4805	4441	4332	3180
45°	3904	3822	3494	3203	3076	3007
55°	2712	2630	2384	2102	1993	2432
65°	1611	1520	1374	1401	1165	1587
75°	646	601	564	537	592	692
85°	91	100	109	118	127	126
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	7871.6	7871.6	7871.6	7871.6	7871.6
2.5°	7817.0	7817.0	7817.0	7807.9	7807.9
5°	7735.1	7726.0	7726.0	7716.9	7716.9
7.5°	7671.4	7662.3	7653.2	7644.1	7625.9
10°	7580.3	7580.3	7571.2	7525.7	7516.6
12.5°	7434.7	7425.6	7389.2	7325.5	7307.3
15°	7234.5	7234.5	7161.7	7088.9	7061.6
17.5°	7016.1	7007.0	6916.0	6843.2	6806.8
20°	6779.5	6761.3	6670.3	6552.0	6488.3
22.5°	6515.6	6515.6	6406.4	6251.7	6188.0
25°	6269.9	6233.5	6133.4	5915.0	5751.2
27.5°	5987.8	5933.2	5824.0	5514.6	5323.5
30°	5678.4	5651.1	5496.4	5096.0	4950.4
32.5°	5387.2	5341.7	5177.9	4759.3	4641.0
35°	5086.9	5050.5	4804.8	4440.8	4331.6
37.5°	4786.6	4741.1	4431.7	4140.5	4004.0
40°	4486.3	4431.7	4095.0	3831.1	3685.5
42.5°	4204.2	4131.4	3803.8	3521.7	3357.9
45°	3903.9	3822.0	3494.4	3203.2	3075.8
47.5°	3603.6	3530.8	3230.5	2930.2	2784.6
50°	3285.1	3221.4	2948.4	2648.1	2493.4
52.5°	3021.2	2921.1	2657.2	2356.9	2229.5
55°	2711.8	2629.9	2384.2	2102.1	1992.9
57.5°	2429.7	2347.8	2120.3	1856.4	1765.4
60°	2165.8	2047.5	1856.4	1628.9	1556.1
62.5°	1874.6	1783.6	1619.8	1428.7	1519.7
65°	1610.7	1519.7	1374.1	1401.4	1164.8
67.5°	1319.5	1274.0	1146.6	1019.2	982.8
70°	1073.8	1019.2	973.7	837.2	800.8
72.5°	855.4	800.8	737.1	664.3	637.0
75°	646.1	600.6	564.2	536.9	591.5
77.5°	445.9	427.7	400.4	373.1	364.0
80°	291.2	282.1	273.0	263.9	254.8
82.5°	172.9	172.9	172.9	172.9	172.9
85°	91.0	100.1	109.2	118.3	127.4
87.5°	54.6	54.6	63.7	72.8	81.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)