

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: P564085

Luminaire Tested: FSR-24-4-LD4-4STD-40-UNV-80-86-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P564085
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-80-86-EDD
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR PC ENVIRON
SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 15278.0 lumens
Efficiency: N/A
Efficacy: 114.7 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

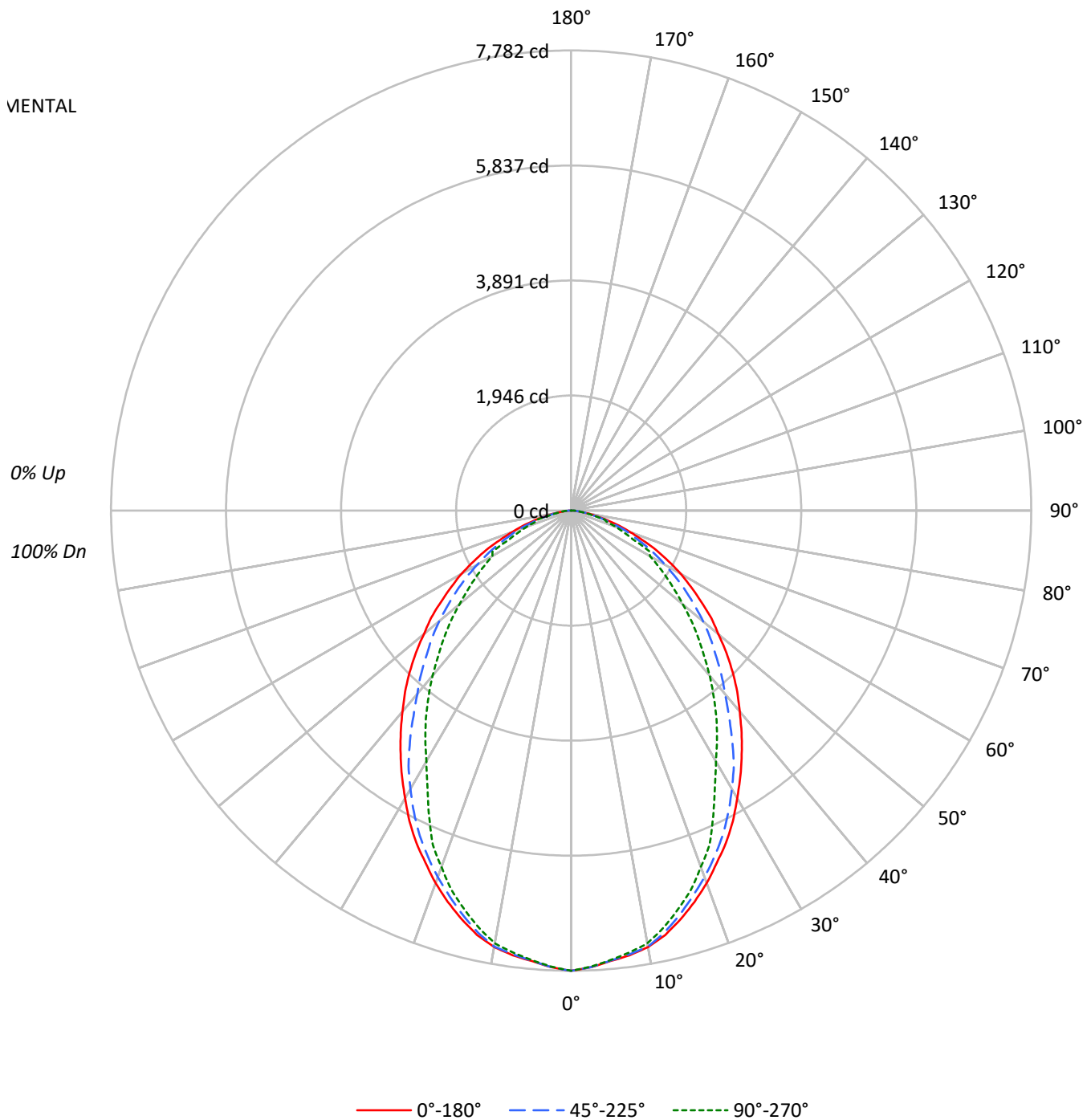
Input Watts (W): 133.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	10471	10471	10471
5°	10329	10317	10305
10°	10239	10227	10153
15°	9963	9863	9725
20°	9597	9443	9185
25°	9203	9003	8441
30°	8722	8443	7604
35°	8261	7803	7034
40°	7791	7111	6400
45°	7344	6574	5786
50°	6799	6102	5160
55°	6289	5529	4622
60°	5762	4939	4140
65°	5070	4325	3666
70°	4176	3787	3115
75°	3321	2900	3040
80°	2231	2091	1952
85°	1389	1667	1945

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7344 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	724.4	4.7
10°-20°	1988.2	13.0
20°-30°	2752.5	18.0
30°-40°	2934.9	19.2
40°-50°	2677.5	17.5
50°-60°	2097.6	13.7
60°-70°	1367.1	8.9
70°-80°	605.7	4.0
80°-90°	130.0	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°	5465.1	35.8
0°-40°	8400.0	55.0
0°-60°	13175.1	86.2
0°-90°	15278.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	15278.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	7782	7782	7782	7782	7782	
5°	7648	7638	7638	7630	7630	726
15°	7153	7153	7081	7009	6982	2011
25°	6199	6163	6064	5848	5686	2846
35°	5029	4993	4750	4390	4283	3144
45°	3860	3779	3455	3167	3041	2973
55°	2681	2600	2357	2078	1970	2405
65°	1592	1502	1358	1386	1152	1569
75°	639	594	558	531	585	685
85°	90	99	108	117	126	125
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	7782.4	7782.4	7782.4	7782.4	7782.4
2.5°	7728.4	7728.4	7728.4	7719.4	7719.4
5°	7647.5	7638.5	7638.5	7629.5	7629.5
7.5°	7584.5	7575.5	7566.5	7557.5	7539.5
10°	7494.5	7494.5	7485.5	7440.5	7431.5
12.5°	7350.6	7341.6	7305.6	7242.6	7224.6
15°	7152.6	7152.6	7080.6	7008.7	6981.7
17.5°	6936.7	6927.7	6837.7	6765.7	6729.8
20°	6702.8	6684.8	6594.8	6477.8	6414.9
22.5°	6441.9	6441.9	6333.9	6180.9	6118.0
25°	6198.9	6162.9	6064.0	5848.1	5686.1
27.5°	5920.0	5866.0	5758.1	5452.2	5263.2
30°	5614.1	5587.1	5434.2	5038.3	4894.4
32.5°	5326.2	5281.2	5119.3	4705.4	4588.5
35°	5029.3	4993.3	4750.4	4390.5	4282.6
37.5°	4732.4	4687.4	4381.5	4093.6	3958.7
40°	4435.5	4381.5	4048.7	3787.7	3643.8
42.5°	4156.6	4084.6	3760.7	3481.8	3319.9
45°	3859.7	3778.7	3454.8	3166.9	3041.0
47.5°	3562.8	3490.8	3193.9	2897.0	2753.1
50°	3247.9	3184.9	2915.0	2618.1	2465.2
52.5°	2987.0	2888.0	2627.1	2330.2	2204.3
55°	2681.1	2600.1	2357.2	2078.3	1970.3
57.5°	2402.2	2321.2	2096.3	1835.4	1745.4
60°	2141.3	2024.3	1835.4	1610.5	1538.5
62.5°	1853.4	1763.4	1601.5	1412.5	1502.5
65°	1592.5	1502.5	1358.5	1385.5	1151.6
67.5°	1304.6	1259.6	1133.6	1007.7	971.7
70°	1061.6	1007.7	962.7	827.7	791.7
72.5°	845.7	791.7	728.8	656.8	629.8
75°	638.8	593.8	557.8	530.8	584.8
77.5°	440.9	422.9	395.9	368.9	359.9
80°	287.9	278.9	269.9	260.9	251.9
82.5°	170.9	170.9	170.9	170.9	170.9
85°	90.0	99.0	108.0	117.0	126.0
87.5°	54.0	54.0	63.0	72.0	81.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)