

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: P563058

Luminaire Tested: FSR-24-4-LD4-3HI-35-UNV-80-85-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563058
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-35-UNV-80-85-EDD-90
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR PC ENVIRONM
SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11777.0 lumens
Efficiency: N/A
Efficacy: 90.9 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

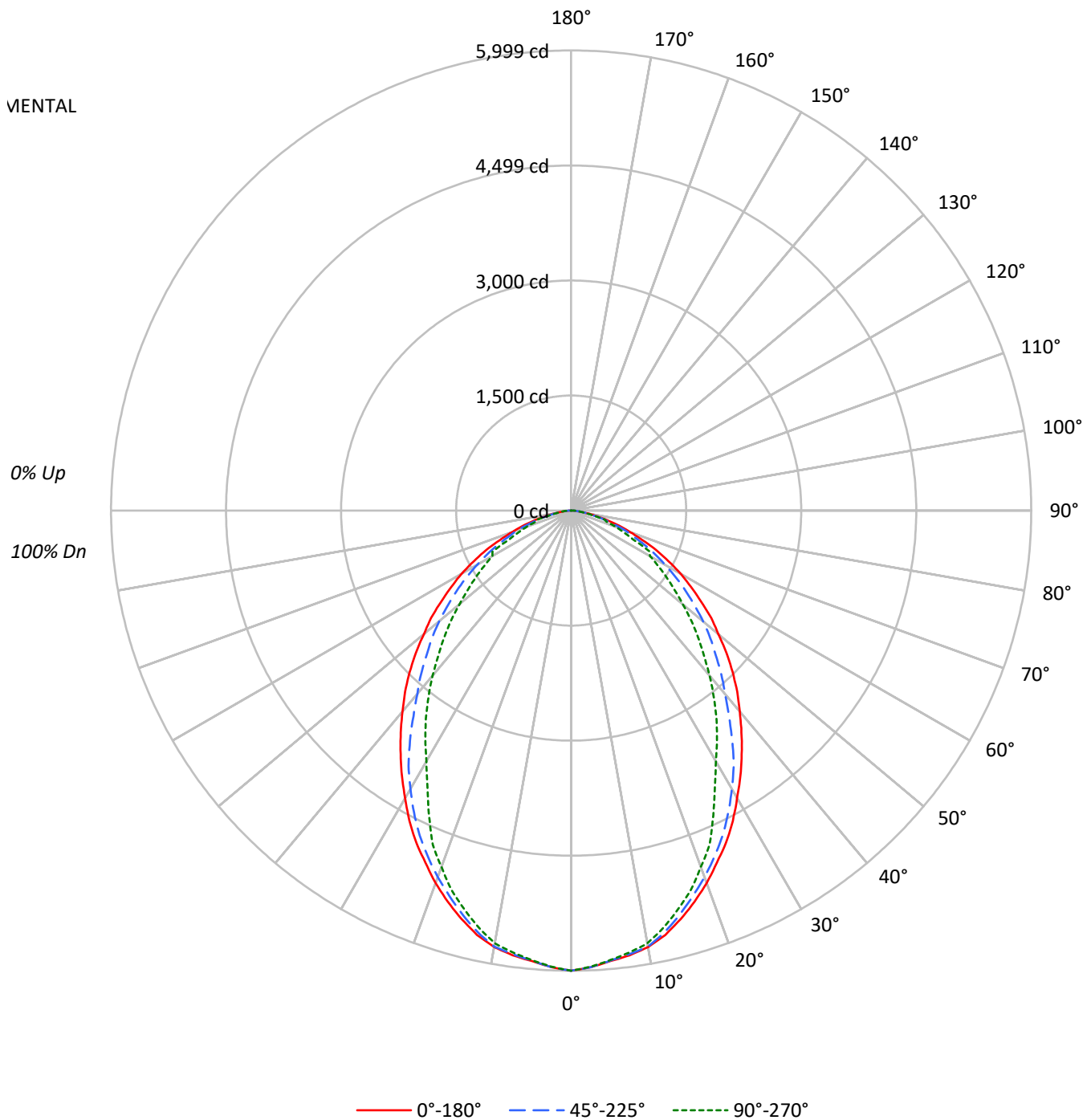
Input Watts (W): 129.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	8072	8072	8072
5°	7962	7953	7943
10°	7893	7884	7827
15°	7680	7603	7497
20°	7398	7279	7080
25°	7094	6940	6507
30°	6724	6508	5862
35°	6368	6015	5422
40°	6005	5482	4933
45°	5661	5068	4460
50°	5241	4703	3978
55°	4848	4263	3563
60°	4442	3807	3191
65°	3908	3334	2826
70°	3220	2919	2401
75°	2560	2235	2344
80°	1719	1612	1505
85°	1071	1284	1499

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5661 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	558.4	4.7
10°-20°	1532.6	13.0
20°-30°	2121.7	18.0
30°-40°	2262.4	19.2
40°-50°	2064.0	17.5
50°-60°	1616.9	13.7
60°-70°	1053.8	8.9
70°-80°	466.9	4.0
80°-90°	100.3	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°	4212.7	35.8
0°-40°	6475.1	55.0
0°-60°	10156.0	86.2
0°-90°	11777.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11777.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5999	5999	5999	5999	5999	
5°	5895	5888	5888	5881	5881	560
15°	5514	5514	5458	5403	5382	1550
25°	4778	4751	4674	4508	4383	2194
35°	3877	3849	3662	3384	3301	2424
45°	2975	2913	2663	2441	2344	2292
55°	2067	2004	1817	1602	1519	1854
65°	1228	1158	1047	1068	888	1210
75°	492	458	430	409	451	528
85°	69	76	83	90	97	96
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5999.0	5999.0	5999.0	5999.0	5999.0
2.5°	5957.4	5957.4	5957.4	5950.5	5950.5
5°	5895.0	5888.1	5888.1	5881.1	5881.1
7.5°	5846.5	5839.5	5832.6	5825.7	5811.8
10°	5777.1	5777.1	5770.2	5735.5	5728.6
12.5°	5666.2	5659.2	5631.5	5582.9	5569.1
15°	5513.6	5513.6	5458.1	5402.6	5381.8
17.5°	5347.1	5340.2	5270.8	5215.4	5187.6
20°	5166.8	5152.9	5083.6	4993.4	4944.9
22.5°	4965.7	4965.7	4882.5	4764.6	4716.0
25°	4778.4	4750.7	4674.4	4508.0	4383.1
27.5°	4563.4	4521.8	4438.6	4202.8	4057.2
30°	4327.6	4306.8	4188.9	3883.8	3772.8
32.5°	4105.7	4071.0	3946.2	3627.2	3537.0
35°	3876.8	3849.1	3661.8	3384.4	3301.2
37.5°	3648.0	3613.3	3377.5	3155.6	3051.5
40°	3419.1	3377.5	3120.9	2919.8	2808.8
42.5°	3204.1	3148.6	2899.0	2684.0	2559.1
45°	2975.2	2912.8	2663.2	2441.2	2344.1
47.5°	2746.4	2690.9	2462.0	2233.2	2122.2
50°	2503.6	2455.1	2247.0	2018.2	1900.3
52.5°	2302.5	2226.2	2025.1	1796.2	1699.2
55°	2066.7	2004.3	1817.1	1602.1	1518.8
57.5°	1851.7	1789.3	1615.9	1414.8	1345.5
60°	1650.6	1560.4	1414.8	1241.4	1185.9
62.5°	1428.7	1359.3	1234.5	1088.8	1158.2
65°	1227.6	1158.2	1047.2	1068.0	887.7
67.5°	1005.6	970.9	873.8	776.8	749.0
70°	818.4	776.8	742.1	638.0	610.3
72.5°	651.9	610.3	561.8	506.3	485.5
75°	492.4	457.7	430.0	409.2	450.8
77.5°	339.8	326.0	305.2	284.3	277.4
80°	221.9	215.0	208.1	201.1	194.2
82.5°	131.8	131.8	131.8	131.8	131.8
85°	69.4	76.3	83.2	90.2	97.1
87.5°	41.6	41.6	48.5	55.5	62.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)