

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: P563440

Luminaire Tested: FSR-24-4-LD4-3STD-35-UNV-80-84-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563440
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-LD4-3STD-35-UNV-80-84-EDD-90
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .125 CLEAR PC ENVIRONM
SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9796.0 lumens
Efficiency: N/A
Efficacy: 98.1 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

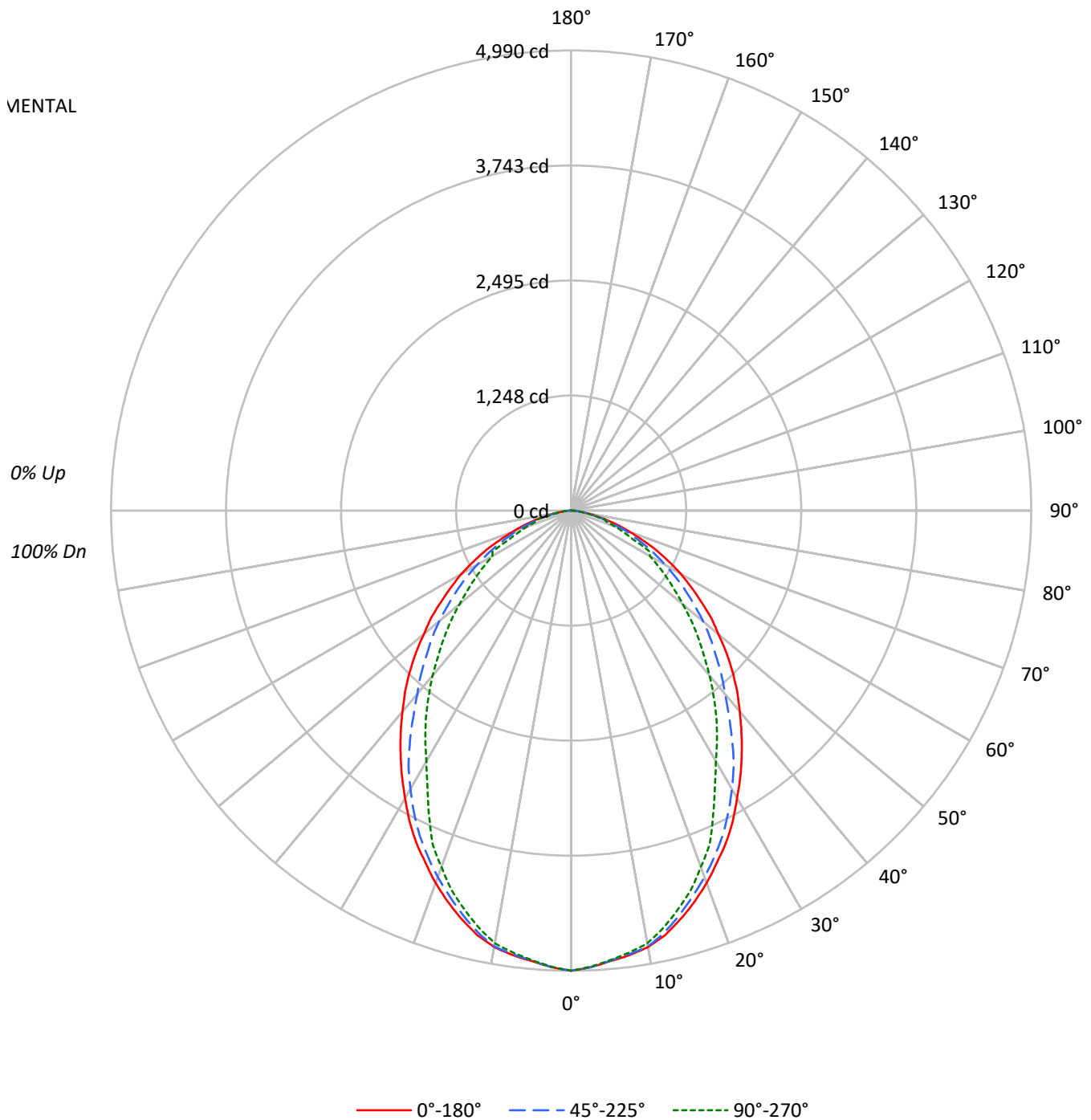
Input Watts (W): 99.9
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	6714	6714	6714
5°	6623	6615	6607
10°	6565	6557	6510
15°	6388	6324	6236
20°	6154	6055	5889
25°	5901	5772	5412
30°	5593	5413	4876
35°	5297	5003	4510
40°	4995	4559	4104
45°	4709	4215	3710
50°	4359	3912	3309
55°	4033	3545	2964
60°	3695	3167	2655
65°	3251	2773	2351
70°	2678	2428	1997
75°	2129	1860	1949
80°	1430	1341	1251
85°	891	1068	1247

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4709 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	464.5	4.7
10°-20°	1274.8	13.0
20°-30°	1764.8	18.0
30°-40°	1881.8	19.2
40°-50°	1716.8	17.5
50°-60°	1345.0	13.7
60°-70°	876.6	8.9
70°-80°	388.4	4.0
80°-90°	83.4	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°	3504.1	35.8
0°-40°	5385.9	55.0
0°-60°	8447.7	86.2
0°-90°	9796.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9796.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4990	4990	4990	4990	4990	
5°	4903	4898	4898	4892	4892	465
15°	4586	4586	4540	4494	4476	1289
25°	3975	3952	3888	3750	3646	1825
35°	3225	3202	3046	2815	2746	2016
45°	2475	2423	2215	2031	1950	1906
55°	1719	1667	1511	1333	1263	1542
65°	1021	963	871	888	738	1006
75°	410	381	358	340	375	439
85°	58	64	69	75	81	80
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4990.0	4990.0	4990.0	4990.0	4990.0
2.5°	4955.3	4955.3	4955.3	4949.6	4949.6
5°	4903.4	4897.7	4897.7	4891.9	4891.9
7.5°	4863.0	4857.3	4851.5	4845.7	4834.2
10°	4805.4	4805.4	4799.6	4770.7	4765.0
12.5°	4713.1	4707.3	4684.2	4643.8	4632.3
15°	4586.1	4586.1	4540.0	4493.8	4476.5
17.5°	4447.7	4441.9	4384.2	4338.1	4315.0
20°	4297.7	4286.2	4228.5	4153.5	4113.1
22.5°	4130.4	4130.4	4061.2	3963.1	3922.7
25°	3974.7	3951.6	3888.1	3749.7	3645.8
27.5°	3795.8	3761.2	3692.0	3495.9	3374.7
30°	3599.7	3582.4	3484.3	3230.5	3138.2
32.5°	3415.1	3386.2	3282.4	3017.0	2942.1
35°	3224.7	3201.6	3045.9	2815.1	2745.9
37.5°	3034.4	3005.5	2809.4	2624.8	2538.2
40°	2844.0	2809.4	2595.9	2428.6	2336.3
42.5°	2665.2	2619.0	2411.3	2232.5	2128.7
45°	2474.8	2422.9	2215.2	2030.6	1949.8
47.5°	2284.4	2238.3	2047.9	1857.5	1765.2
50°	2082.5	2042.1	1869.1	1678.7	1580.6
52.5°	1915.2	1851.8	1684.5	1494.1	1413.3
55°	1719.1	1667.2	1511.4	1332.6	1263.4
57.5°	1540.3	1488.3	1344.1	1176.8	1119.1
60°	1373.0	1298.0	1176.8	1032.6	986.5
62.5°	1188.4	1130.7	1026.8	905.7	963.4
65°	1021.1	963.4	871.1	888.4	738.4
67.5°	836.5	807.6	726.9	646.1	623.0
70°	680.7	646.1	617.3	530.7	507.6
72.5°	542.3	507.6	467.3	421.1	403.8
75°	409.6	380.7	357.7	340.4	375.0
77.5°	282.7	271.1	253.8	236.5	230.7
80°	184.6	178.8	173.1	167.3	161.5
82.5°	109.6	109.6	109.6	109.6	109.6
85°	57.7	63.5	69.2	75.0	80.8
87.5°	34.6	34.6	40.4	46.1	51.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)