

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: P563317

Luminaire Tested: FSR-24-4-LD4-3LO-40-UNV-80-86-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563317
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-LD4-3LO-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: 8556.0 lumens
Efficiency: N/A
Efficacy: 121.9 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

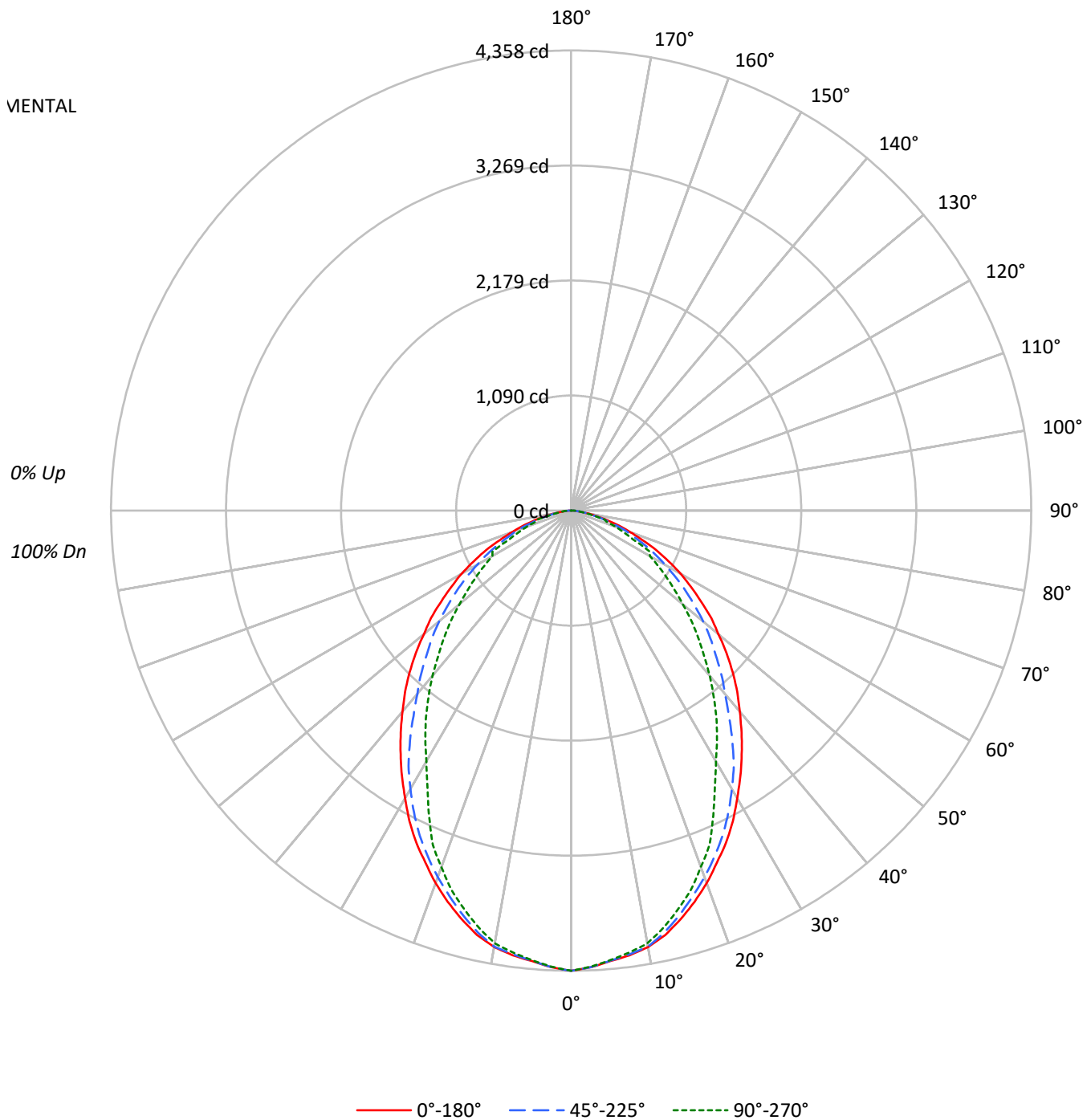
Input Watts (W): 70.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	5864	5864	5864
5°	5784	5778	5771
10°	5734	5727	5686
15°	5580	5523	5446
20°	5375	5288	5144
25°	5154	5042	4727
30°	4885	4728	4259
35°	4626	4370	3939
40°	4363	3982	3584
45°	4113	3682	3240
50°	3807	3417	2890
55°	3522	3097	2588
60°	3227	2766	2319
65°	2839	2422	2053
70°	2339	2121	1744
75°	1860	1624	1703
80°	1249	1172	1093
85°	778	934	1088

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4113 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	405.7	4.7
10°-20°	1113.4	13.0
20°-30°	1541.4	18.0
30°-40°	1643.6	19.2
40°-50°	1499.5	17.5
50°-60°	1174.7	13.7
60°-70°	765.6	8.9
70°-80°	339.2	4.0
80°-90°	72.8	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°	3060.6	35.8
0°-40°	4704.2	55.0
0°-60°	7378.4	86.2
0°-90°	8556.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8556.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4358	4358	4358	4358	4358	
5°	4283	4278	4278	4273	4273	407
15°	4006	4006	3965	3925	3910	1126
25°	3472	3451	3396	3275	3184	1594
35°	2816	2796	2660	2459	2398	1761
45°	2162	2116	1935	1774	1703	1665
55°	1502	1456	1320	1164	1103	1347
65°	892	841	761	776	645	879
75°	358	332	312	297	328	383
85°	50	55	60	66	70	70
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4358.3	4358.3	4358.3	4358.3	4358.3
2.5°	4328.1	4328.1	4328.1	4323.0	4323.0
5°	4282.7	4277.7	4277.7	4272.7	4272.7
7.5°	4247.5	4242.4	4237.4	4232.3	4222.3
10°	4197.1	4197.1	4192.0	4166.8	4161.8
12.5°	4116.5	4111.4	4091.3	4056.0	4045.9
15°	4005.6	4005.6	3965.3	3925.0	3909.9
17.5°	3884.7	3879.7	3829.3	3789.0	3768.8
20°	3753.7	3743.6	3693.2	3627.7	3592.5
22.5°	3607.6	3607.6	3547.1	3461.5	3426.2
25°	3471.5	3451.4	3396.0	3275.0	3184.3
27.5°	3315.3	3285.1	3224.6	3053.3	2947.5
30°	3144.0	3128.9	3043.3	2821.6	2741.0
32.5°	2982.8	2957.6	2866.9	2635.1	2569.6
35°	2816.5	2796.4	2660.3	2458.8	2398.3
37.5°	2650.3	2625.1	2453.8	2292.5	2216.9
40°	2484.0	2453.8	2267.3	2121.2	2040.6
42.5°	2327.8	2287.5	2106.1	1949.9	1859.2
45°	2161.5	2116.2	1934.8	1773.6	1703.0
47.5°	1995.3	1954.9	1788.7	1622.4	1541.8
50°	1818.9	1783.6	1632.5	1466.2	1380.6
52.5°	1672.8	1617.4	1471.2	1305.0	1234.4
55°	1501.5	1456.1	1320.1	1163.9	1103.4
57.5°	1345.3	1299.9	1174.0	1027.9	977.5
60°	1199.2	1133.7	1027.9	901.9	861.6
62.5°	1037.9	987.5	896.9	791.0	841.4
65°	891.8	841.4	760.8	775.9	644.9
67.5°	730.6	705.4	634.9	564.3	544.2
70°	594.5	564.3	539.1	463.5	443.4
72.5°	473.6	443.4	408.1	367.8	352.7
75°	357.7	332.5	312.4	297.3	327.5
77.5°	246.9	236.8	221.7	206.6	201.5
80°	161.2	156.2	151.2	146.1	141.1
82.5°	95.7	95.7	95.7	95.7	95.7
85°	50.4	55.4	60.5	65.5	70.5
87.5°	30.2	30.2	35.3	40.3	45.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)