

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: P563577

Luminaire Tested: FSR-24-4-LD4-3STD-50-UNV-80-88-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563577
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-50-UNV-80-88-EDD
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .500 CLEAR PC ENVIRON
SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10153.0 lumens
Efficiency: N/A
Efficacy: 101.6 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

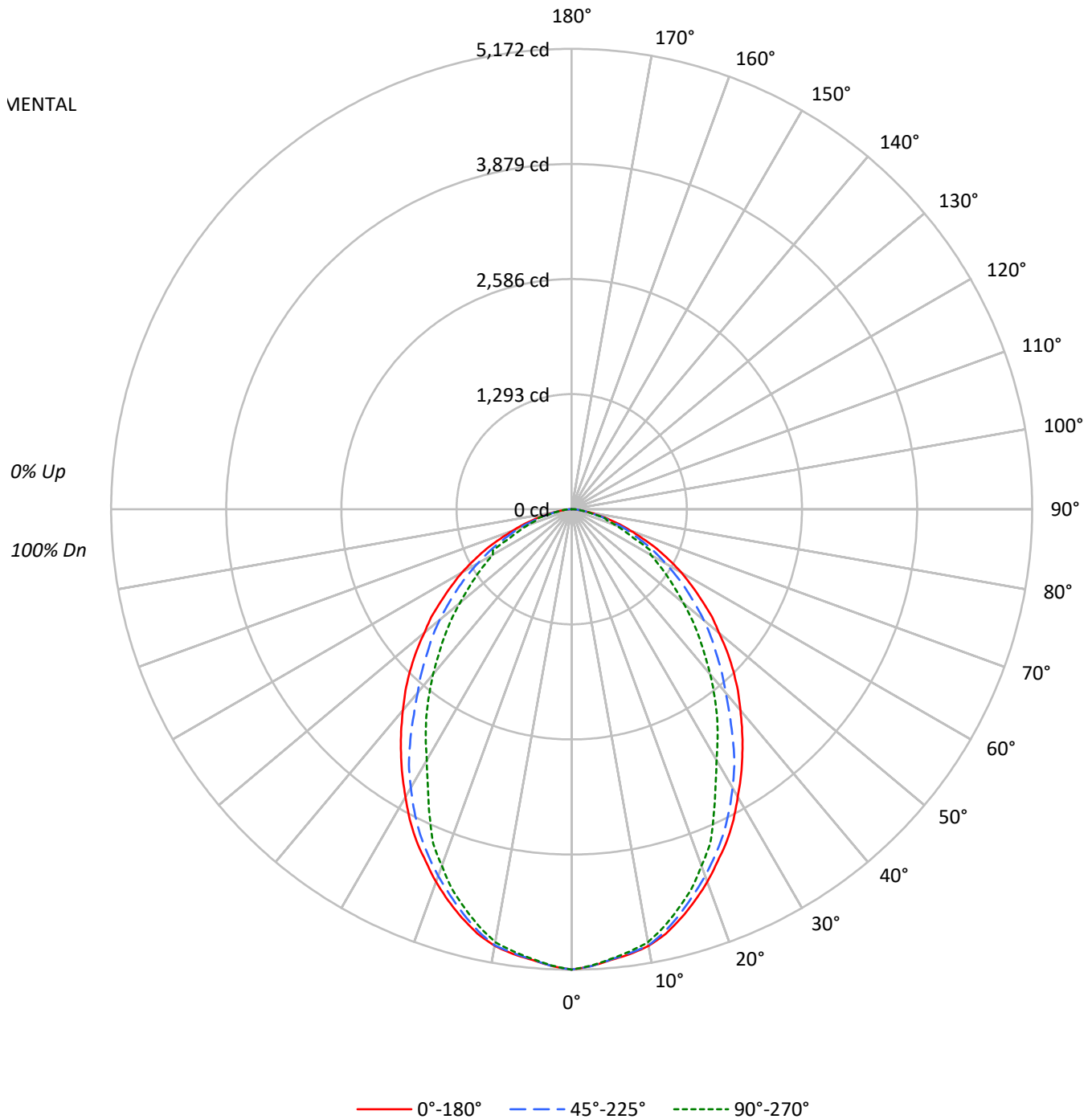
Input Watts (W): 99.9
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	6959	6959	6959
5°	6864	6856	6848
10°	6805	6796	6747
15°	6621	6554	6463
20°	6378	6275	6104
25°	6116	5983	5610
30°	5796	5611	5053
35°	5490	5185	4675
40°	5177	4726	4253
45°	4881	4369	3845
50°	4518	4055	3429
55°	4179	3675	3072
60°	3829	3282	2751
65°	3369	2874	2436
70°	2775	2517	2070
75°	2207	1927	2020
80°	1482	1390	1297
85°	923	1107	1292

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4881 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	481.4	4.7
10°-20°	1321.2	13.0
20°-30°	1829.2	18.0
30°-40°	1950.4	19.2
40°-50°	1779.3	17.5
50°-60°	1394.0	13.7
60°-70°	908.5	8.9
70°-80°	402.5	4.0
80°-90°	86.4	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°	3631.8	35.8
0°-40°	5582.2	55.0
0°-60°	8755.5	86.2
0°-90°	10153.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10153.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5172	5172	5172	5172	5172	
5°	5082	5076	5076	5070	5070	482
15°	4753	4753	4705	4658	4640	1336
25°	4120	4096	4030	3886	3779	1891
35°	3342	3318	3157	2918	2846	2089
45°	2565	2511	2296	2105	2021	1976
55°	1782	1728	1566	1381	1309	1598
65°	1058	998	903	921	765	1043
75°	424	395	371	353	389	455
85°	60	66	72	78	84	83
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5171.8	5171.8	5171.8	5171.8	5171.8
2.5°	5135.9	5135.9	5135.9	5129.9	5129.9
5°	5082.1	5076.1	5076.1	5070.2	5070.2
7.5°	5040.3	5034.3	5028.3	5022.3	5010.4
10°	4980.5	4980.5	4974.5	4944.6	4938.6
12.5°	4884.8	4878.8	4854.9	4813.1	4801.1
15°	4753.3	4753.3	4705.4	4657.6	4639.7
17.5°	4609.8	4603.8	4544.0	4496.2	4472.3
20°	4454.3	4442.4	4382.6	4304.9	4263.0
22.5°	4280.9	4280.9	4209.2	4107.5	4065.7
25°	4119.5	4095.6	4029.8	3886.3	3778.7
27.5°	3934.2	3898.3	3826.5	3623.3	3497.7
30°	3730.9	3712.9	3611.3	3348.2	3252.6
32.5°	3539.5	3509.7	3402.0	3127.0	3049.3
35°	3342.2	3318.3	3156.9	2917.7	2846.0
37.5°	3144.9	3115.0	2911.8	2720.4	2630.7
40°	2947.6	2911.8	2690.5	2517.1	2421.5
42.5°	2762.3	2714.4	2499.2	2313.9	2206.2
45°	2565.0	2511.2	2295.9	2104.6	2020.9
47.5°	2367.7	2319.8	2122.5	1925.2	1829.6
50°	2158.4	2116.6	1937.2	1739.9	1638.2
52.5°	1985.0	1919.2	1745.9	1548.6	1464.8
55°	1781.7	1727.9	1566.5	1381.1	1309.4
57.5°	1596.4	1542.6	1393.1	1219.7	1159.9
60°	1423.0	1345.3	1219.7	1070.2	1022.4
62.5°	1231.7	1171.9	1064.3	938.7	998.5
65°	1058.3	998.5	902.8	920.8	765.3
67.5°	866.9	837.1	753.3	669.6	645.7
70°	705.5	669.6	639.7	550.1	526.1
72.5°	562.0	526.1	484.3	436.5	418.5
75°	424.5	394.6	370.7	352.8	388.6
77.5°	293.0	281.0	263.1	245.1	239.2
80°	191.3	185.3	179.4	173.4	167.4
82.5°	113.6	113.6	113.6	113.6	113.6
85°	59.8	65.8	71.7	77.7	83.7
87.5°	35.9	35.9	41.9	47.8	53.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)