

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: P561307

Luminaire Tested: FSR-12-4-LD4-1STD-50-UNV-82-94-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561307
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-12-4-LD4-1STD-50-UNV-82-94-EDD
Description: 1X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3180.0 lumens
Efficiency: N/A
Efficacy: 95.5 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

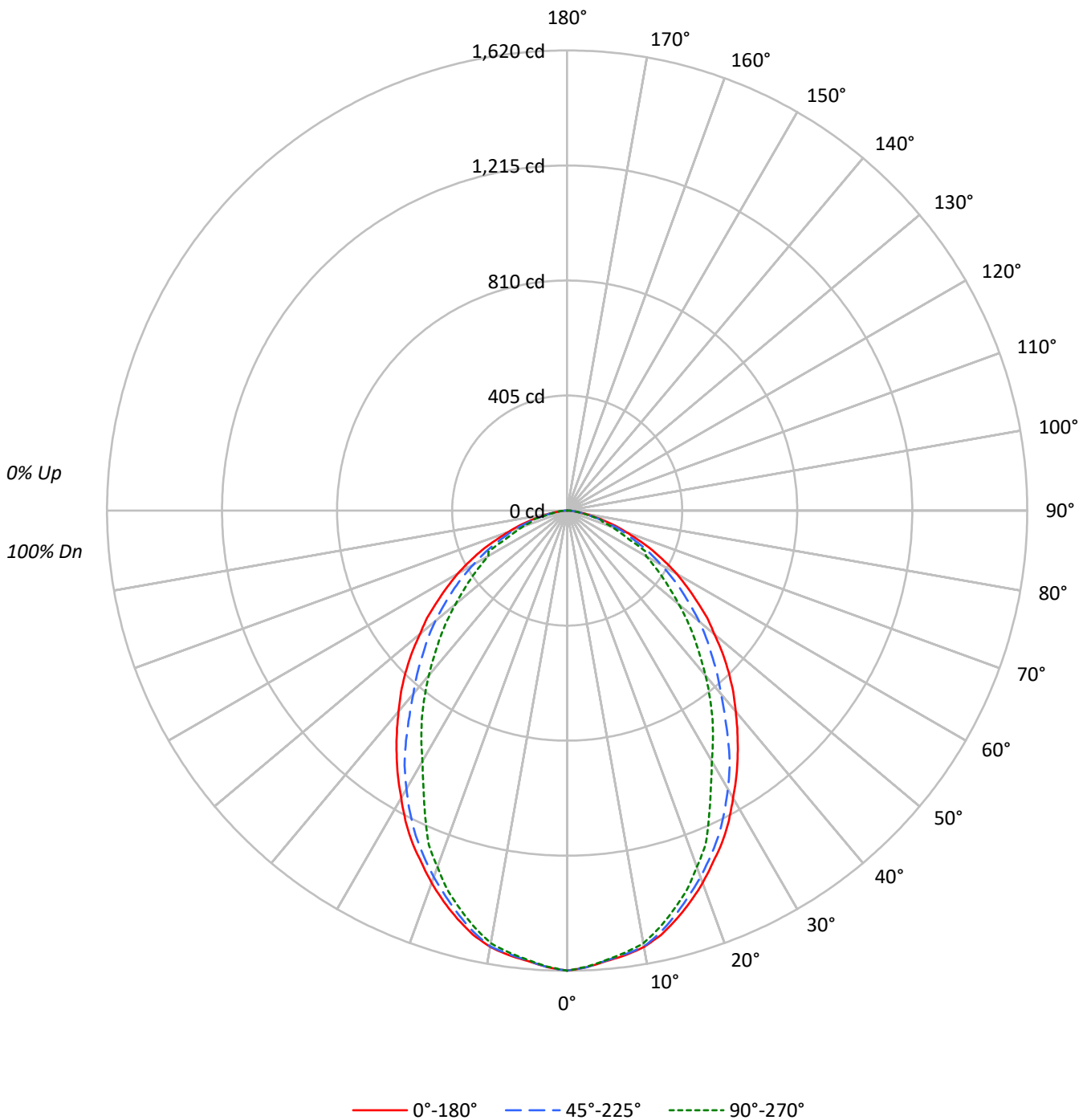
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	4359	4359	4359
5°	4300	4295	4290
10°	4262	4257	4227
15°	4148	4106	4048
20°	3995	3931	3824
25°	3831	3748	3514
30°	3631	3515	3165
35°	3439	3248	2928
40°	3243	2960	2664
45°	3057	2737	2409
50°	2830	2540	2148
55°	2618	2302	1924
60°	2399	2056	1723
65°	2111	1801	1526
70°	1739	1577	1297
75°	1383	1207	1265
80°	928	871	812
85°	577	695	809

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3057 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	150.8	4.7
10°-20°	413.8	13.0
20°-30°	572.9	18.0
30°-40°	610.9	19.2
40°-50°	557.3	17.5
50°-60°	436.6	13.7
60°-70°	284.6	8.9
70°-80°	126.1	4.0
80°-90°	27.1	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°	1137.5	35.8
0°-40°	1748.4	55.0
0°-60°	2742.3	86.2
0°-90°	3180.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3180.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1620	1620	1620	1620	1620	
5°	1592	1590	1590	1588	1588	151
15°	1489	1489	1474	1459	1453	419
25°	1290	1283	1262	1217	1184	592
35°	1047	1039	989	914	891	654
45°	803	786	719	659	633	619
55°	558	541	491	433	410	501
65°	332	313	283	288	240	327
75°	133	124	116	110	122	143
85°	19	21	22	24	26	26
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1619.8	1619.8	1619.8	1619.8	1619.8
2.5°	1608.6	1608.6	1608.6	1606.7	1606.7
5°	1591.8	1589.9	1589.9	1588.0	1588.0
7.5°	1578.7	1576.8	1574.9	1573.0	1569.3
10°	1559.9	1559.9	1558.1	1548.7	1546.8
12.5°	1530.0	1528.1	1520.6	1507.5	1503.7
15°	1488.8	1488.8	1473.8	1458.8	1453.2
17.5°	1443.8	1441.9	1423.2	1408.2	1400.7
20°	1395.1	1391.4	1372.7	1348.3	1335.2
22.5°	1340.8	1340.8	1318.4	1286.5	1273.4
25°	1290.3	1282.8	1262.2	1217.2	1183.5
27.5°	1232.2	1221.0	1198.5	1134.8	1095.5
30°	1168.5	1162.9	1131.1	1048.7	1018.7
32.5°	1108.6	1099.3	1065.5	979.4	955.1
35°	1046.8	1039.3	988.8	913.9	891.4
37.5°	985.0	975.7	912.0	852.1	824.0
40°	923.2	912.0	842.7	788.4	758.4
42.5°	865.2	850.2	782.8	724.7	691.0
45°	803.4	786.5	719.1	659.2	633.0
47.5°	741.6	726.6	664.8	603.0	573.0
50°	676.0	662.9	606.7	544.9	513.1
52.5°	621.7	601.1	546.8	485.0	458.8
55°	558.1	541.2	490.6	432.6	410.1
57.5°	500.0	483.1	436.3	382.0	363.3
60°	445.7	421.3	382.0	335.2	320.2
62.5°	385.8	367.0	333.3	294.0	312.7
65°	331.5	312.7	282.8	288.4	239.7
67.5°	271.5	262.2	236.0	209.7	202.2
70°	221.0	209.7	200.4	172.3	164.8
72.5°	176.0	164.8	151.7	136.7	131.1
75°	133.0	123.6	116.1	110.5	121.7
77.5°	91.8	88.0	82.4	76.8	74.9
80°	59.9	58.1	56.2	54.3	52.4
82.5°	35.6	35.6	35.6	35.6	35.6
85°	18.7	20.6	22.5	24.3	26.2
87.5°	11.2	11.2	13.1	15.0	16.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)