

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: P562314

Luminaire Tested: FSR-24-4-LD4-1STD-35-UNV-81-94-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562314
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-LD4-1STD-35-UNV-81-94-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3109.0 lumens
Efficiency: N/A
Efficacy: 93.4 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

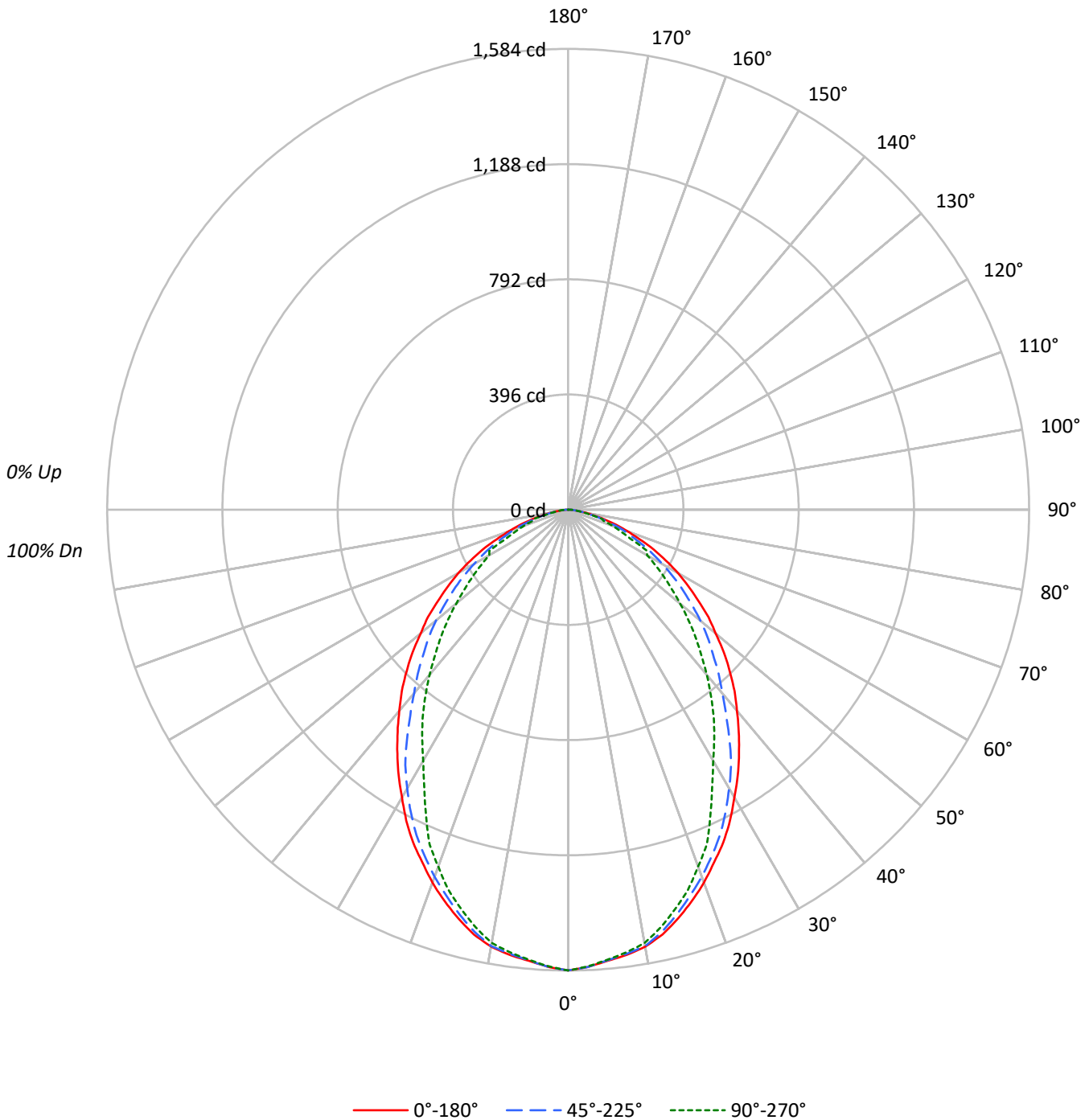
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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				
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°	2131	2131	2131
5°	2102	2099	2097
10°	2084	2081	2066
15°	2027	2007	1979
20°	1953	1922	1869
25°	1873	1832	1718
30°	1775	1718	1547
35°	1681	1588	1431
40°	1585	1447	1302
45°	1494	1338	1177
50°	1383	1242	1050
55°	1280	1125	941
60°	1172	1005	843
65°	1032	880	746
70°	850	771	634
75°	676	590	619
80°	454	425	397
85°	283	340	395

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1494 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	147.4	4.7
10°-20°	404.6	13.0
20°-30°	560.1	18.0
30°-40°	597.2	19.2
40°-50°	544.9	17.5
50°-60°	426.9	13.7
60°-70°	278.2	8.9
70°-80°	123.3	4.0
80°-90°	26.5	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°	1112.1	35.8
0°-40°	1709.4	55.0
0°-60°	2681.1	86.2
0°-90°	3109.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3109.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1584	1584	1584	1584	1584	
5°	1556	1554	1554	1553	1553	148
15°	1456	1456	1441	1426	1421	409
25°	1262	1254	1234	1190	1157	579
35°	1023	1016	967	894	872	640
45°	785	769	703	644	619	605
55°	546	529	480	423	401	489
65°	324	306	276	282	234	319
75°	130	121	114	108	119	139
85°	18	20	22	24	26	25
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1583.7	1583.7	1583.7	1583.7	1583.7
2.5°	1572.7	1572.7	1572.7	1570.9	1570.9
5°	1556.2	1554.4	1554.4	1552.6	1552.6
7.5°	1543.4	1541.6	1539.7	1537.9	1534.3
10°	1525.1	1525.1	1523.3	1514.1	1512.3
12.5°	1495.8	1494.0	1486.6	1473.8	1470.2
15°	1455.5	1455.5	1440.9	1426.2	1420.7
17.5°	1411.6	1409.8	1391.4	1376.8	1369.5
20°	1364.0	1360.3	1342.0	1318.2	1305.4
22.5°	1310.9	1310.9	1288.9	1257.8	1245.0
25°	1261.5	1254.1	1234.0	1190.1	1157.1
27.5°	1204.7	1193.7	1171.7	1109.5	1071.0
30°	1142.4	1137.0	1105.8	1025.3	996.0
32.5°	1083.9	1074.7	1041.8	957.5	933.7
35°	1023.4	1016.1	966.7	893.5	871.5
37.5°	963.0	953.9	891.6	833.0	805.6
40°	902.6	891.6	823.9	770.8	741.5
42.5°	845.9	831.2	765.3	708.5	675.6
45°	785.4	769.0	703.0	644.5	618.8
47.5°	725.0	710.4	650.0	589.5	560.2
50°	660.9	648.1	593.2	532.8	501.7
52.5°	607.8	587.7	534.6	474.2	448.6
55°	545.6	529.1	479.7	422.9	401.0
57.5°	488.8	472.4	426.6	373.5	355.2
60°	435.7	411.9	373.5	327.7	313.1
62.5°	377.2	358.8	325.9	287.4	305.8
65°	324.1	305.8	276.5	282.0	234.3
67.5°	265.5	256.3	230.7	205.1	197.7
70°	216.0	205.1	195.9	168.4	161.1
72.5°	172.1	161.1	148.3	133.7	128.2
75°	130.0	120.8	113.5	108.0	119.0
77.5°	89.7	86.0	80.6	75.1	73.2
80°	58.6	56.8	54.9	53.1	51.3
82.5°	34.8	34.8	34.8	34.8	34.8
85°	18.3	20.1	22.0	23.8	25.6
87.5°	11.0	11.0	12.8	14.6	16.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)