

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: P562394

Luminaire Tested: FSR-24-4-LD4-1STD-40-UNV-82-94-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562394
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-40-UNV-82-94-EDD-90
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3087.0 lumens
Efficiency: N/A
Efficacy: 92.7 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

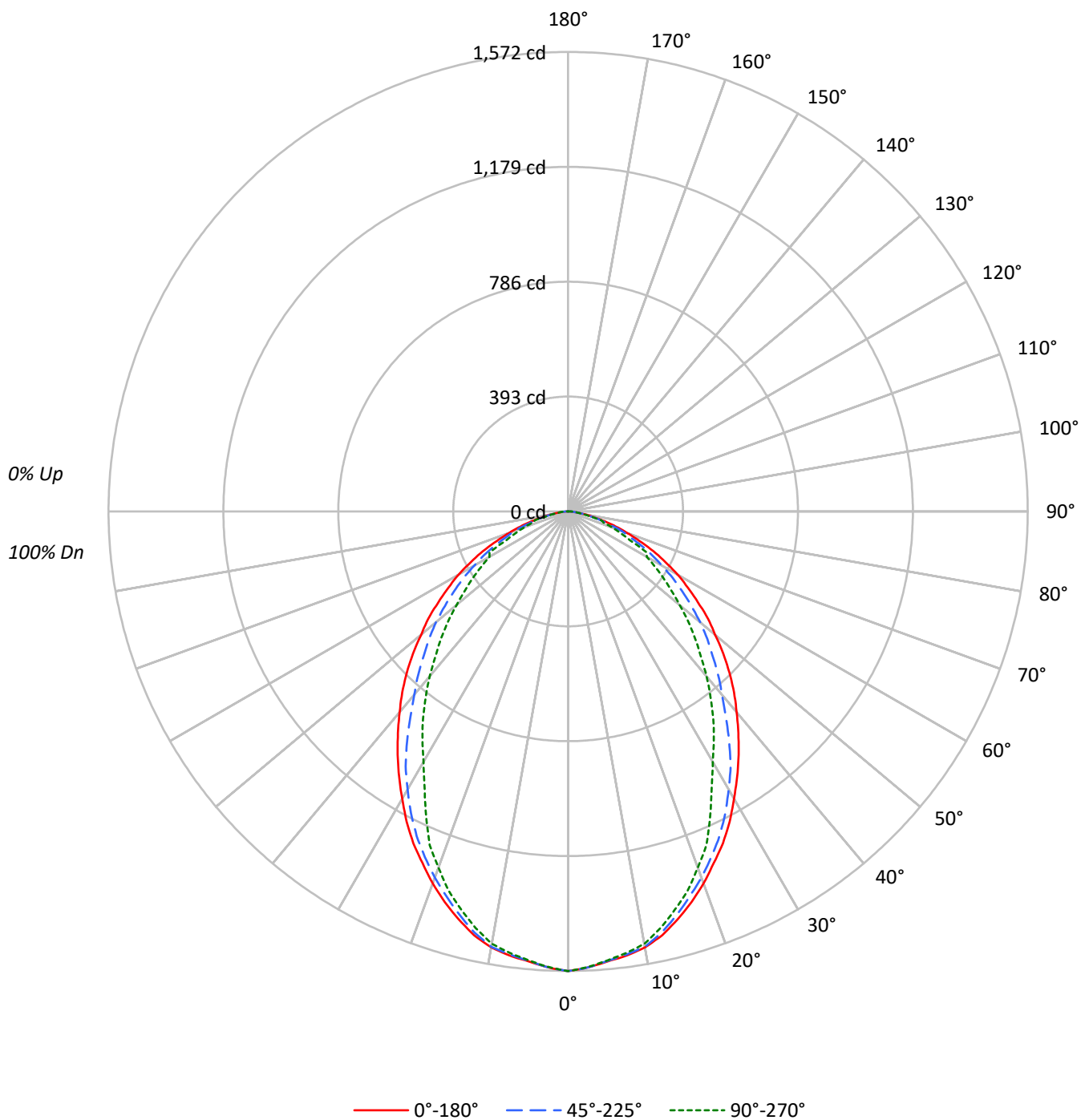
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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					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°	2116	2116	2116
5°	2087	2085	2082
10°	2069	2066	2052
15°	2013	1993	1965
20°	1939	1908	1856
25°	1859	1819	1706
30°	1762	1706	1536
35°	1669	1577	1421
40°	1574	1437	1293
45°	1484	1328	1169
50°	1374	1233	1043
55°	1271	1117	934
60°	1164	998	837
65°	1025	874	741
70°	844	765	629
75°	671	586	614
80°	451	422	394
85°	281	337	394

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1484 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	146.4	4.7
10°-20°	401.7	13.0
20°-30°	556.2	18.0
30°-40°	593.0	19.2
40°-50°	541.0	17.5
50°-60°	423.8	13.7
60°-70°	276.2	8.9
70°-80°	122.4	4.0
80°-90°	26.3	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°	1104.2	35.8
0°-40°	1697.3	55.0
0°-60°	2662.1	86.2
0°-90°	3087.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3087.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1572	1572	1572	1572	1572	
5°	1545	1543	1543	1542	1542	147
15°	1445	1445	1431	1416	1411	406
25°	1252	1245	1225	1182	1149	575
35°	1016	1009	960	887	865	635
45°	780	764	698	640	614	601
55°	542	525	476	420	398	486
65°	322	304	274	280	233	317
75°	129	120	113	107	118	138
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°	1572.5	1572.5	1572.5	1572.5	1572.5
2.5°	1561.6	1561.6	1561.6	1559.8	1559.8
5°	1545.2	1543.4	1543.4	1541.6	1541.6
7.5°	1532.5	1530.7	1528.8	1527.0	1523.4
10°	1514.3	1514.3	1512.5	1503.4	1501.6
12.5°	1485.2	1483.4	1476.1	1463.4	1459.8
15°	1445.2	1445.2	1430.7	1416.1	1410.7
17.5°	1401.6	1399.8	1381.6	1367.1	1359.8
20°	1354.3	1350.7	1332.5	1308.9	1296.2
22.5°	1301.6	1301.6	1279.8	1248.9	1236.2
25°	1252.5	1245.3	1225.3	1181.6	1148.9
27.5°	1196.2	1185.3	1163.5	1101.6	1063.5
30°	1134.4	1128.9	1098.0	1018.0	988.9
32.5°	1076.2	1067.1	1034.4	950.8	927.1
35°	1016.2	1008.9	959.8	887.1	865.3
37.5°	956.2	947.1	885.3	827.1	799.9
40°	896.2	885.3	818.1	765.3	736.2
42.5°	839.9	825.3	759.9	703.5	670.8
45°	779.9	763.5	698.1	639.9	614.4
47.5°	719.9	705.3	645.4	585.4	556.3
50°	656.3	643.5	589.0	529.0	498.1
52.5°	603.5	583.5	530.8	470.8	445.4
55°	541.7	525.4	476.3	419.9	398.1
57.5°	485.4	469.0	423.6	370.8	352.7
60°	432.7	409.0	370.8	325.4	310.9
62.5°	374.5	356.3	323.6	285.4	303.6
65°	321.8	303.6	274.5	280.0	232.7
67.5°	263.6	254.5	229.1	203.6	196.3
70°	214.5	203.6	194.5	167.2	160.0
72.5°	170.9	160.0	147.2	132.7	127.3
75°	129.1	120.0	112.7	107.3	118.2
77.5°	89.1	85.4	80.0	74.5	72.7
80°	58.2	56.4	54.5	52.7	50.9
82.5°	34.5	34.5	34.5	34.5	34.5
85°	18.2	20.0	21.8	23.6	25.5
87.5°	10.9	10.9	12.7	14.5	16.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)