

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: P562465

Luminaire Tested: FSR-24-4-LD4-1STD-50-UNV-93-84-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562465
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-50-UNV-93-84-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4016.0 lumens
Efficiency: N/A
Efficacy: 120.6 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

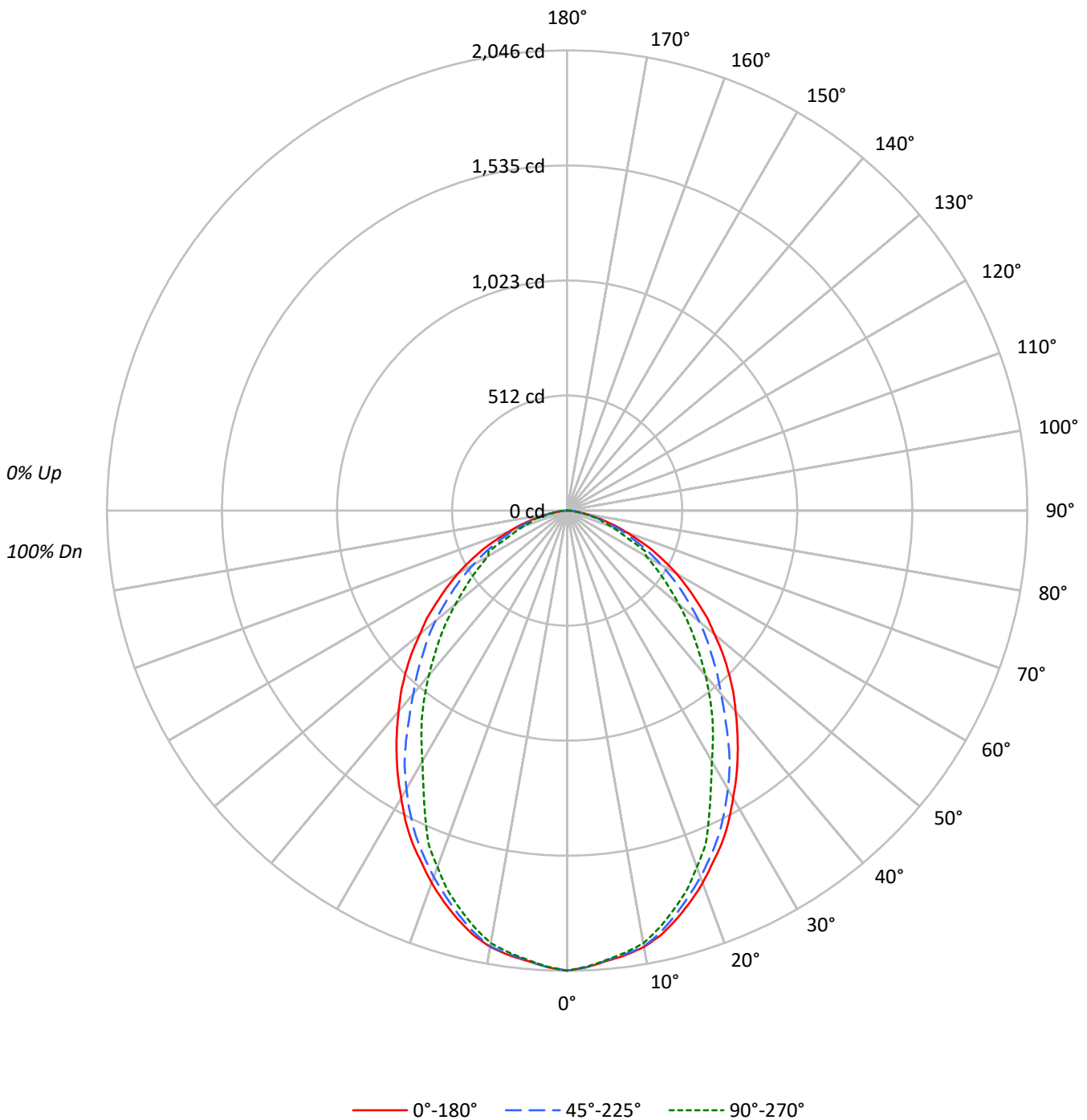
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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					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°	2752	2752	2752
5°	2715	2712	2709
10°	2692	2688	2669
15°	2619	2593	2556
20°	2523	2482	2414
25°	2419	2366	2219
30°	2293	2219	1999
35°	2171	2051	1849
40°	2048	1869	1682
45°	1931	1728	1521
50°	1787	1604	1356
55°	1653	1453	1215
60°	1515	1298	1088
65°	1333	1137	964
70°	1098	996	819
75°	873	762	799
80°	587	549	513
85°	364	438	511

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1931 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	190.4	4.7
10°-20°	522.6	13.0
20°-30°	723.5	18.0
30°-40°	771.5	19.2
40°-50°	703.8	17.5
50°-60°	551.4	13.7
60°-70°	359.4	8.9
70°-80°	159.2	4.0
80°-90°	34.2	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°	1436.6	35.8
0°-40°	2208.0	55.0
0°-60°	3463.2	86.2
0°-90°	4016.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4016.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2046	2046	2046	2046	2046	
5°	2010	2008	2008	2006	2006	191
15°	1880	1880	1861	1842	1835	529
25°	1630	1620	1594	1537	1495	748
35°	1322	1313	1249	1154	1126	827
45°	1015	993	908	832	799	782
55°	705	684	620	546	518	632
65°	419	395	357	364	303	413
75°	168	156	147	140	154	180
85°	24	26	28	31	33	33
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2045.7	2045.7	2045.7	2045.7	2045.7
2.5°	2031.5	2031.5	2031.5	2029.1	2029.1
5°	2010.2	2007.9	2007.9	2005.5	2005.5
7.5°	1993.7	1991.3	1988.9	1986.6	1981.8
10°	1970.0	1970.0	1967.7	1955.8	1953.5
12.5°	1932.2	1929.8	1920.4	1903.8	1899.1
15°	1880.1	1880.1	1861.2	1842.3	1835.2
17.5°	1823.4	1821.0	1797.4	1778.5	1769.0
20°	1761.9	1757.2	1733.5	1702.8	1686.2
22.5°	1693.3	1693.3	1664.9	1624.7	1608.2
25°	1629.5	1620.0	1594.0	1537.2	1494.7
27.5°	1556.1	1542.0	1513.6	1433.2	1383.5
30°	1475.7	1468.6	1428.4	1324.4	1286.5
32.5°	1400.1	1388.2	1345.7	1236.9	1206.1
35°	1322.0	1312.6	1248.7	1154.1	1125.7
37.5°	1244.0	1232.1	1151.7	1076.1	1040.6
40°	1165.9	1151.7	1064.2	995.7	957.8
42.5°	1092.6	1073.7	988.6	915.2	872.7
45°	1014.6	993.3	908.1	832.5	799.4
47.5°	936.5	917.6	839.6	761.5	723.7
50°	853.8	837.2	766.2	688.2	648.0
52.5°	785.2	759.2	690.6	612.5	579.4
55°	704.8	683.5	619.6	546.3	517.9
57.5°	631.4	610.2	551.0	482.5	458.8
60°	562.9	532.1	482.5	423.3	404.4
62.5°	487.2	463.5	421.0	371.3	394.9
65°	418.6	394.9	357.1	364.2	302.7
67.5°	342.9	331.1	298.0	264.9	255.4
70°	279.1	264.9	253.1	217.6	208.1
72.5°	222.3	208.1	191.6	172.6	165.5
75°	167.9	156.1	146.6	139.5	153.7
77.5°	115.9	111.2	104.1	97.0	94.6
80°	75.7	73.3	70.9	68.6	66.2
82.5°	44.9	44.9	44.9	44.9	44.9
85°	23.6	26.0	28.4	30.7	33.1
87.5°	14.2	14.2	16.6	18.9	21.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)