

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: P562255

Luminaire Tested: FSR-24-4-LD4-1LO-50-UNV-81-97-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562255
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-LD4-1LO-50-UNV-81-97-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 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: 2717.0 lumens
Efficiency: N/A
Efficacy: 116.1 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

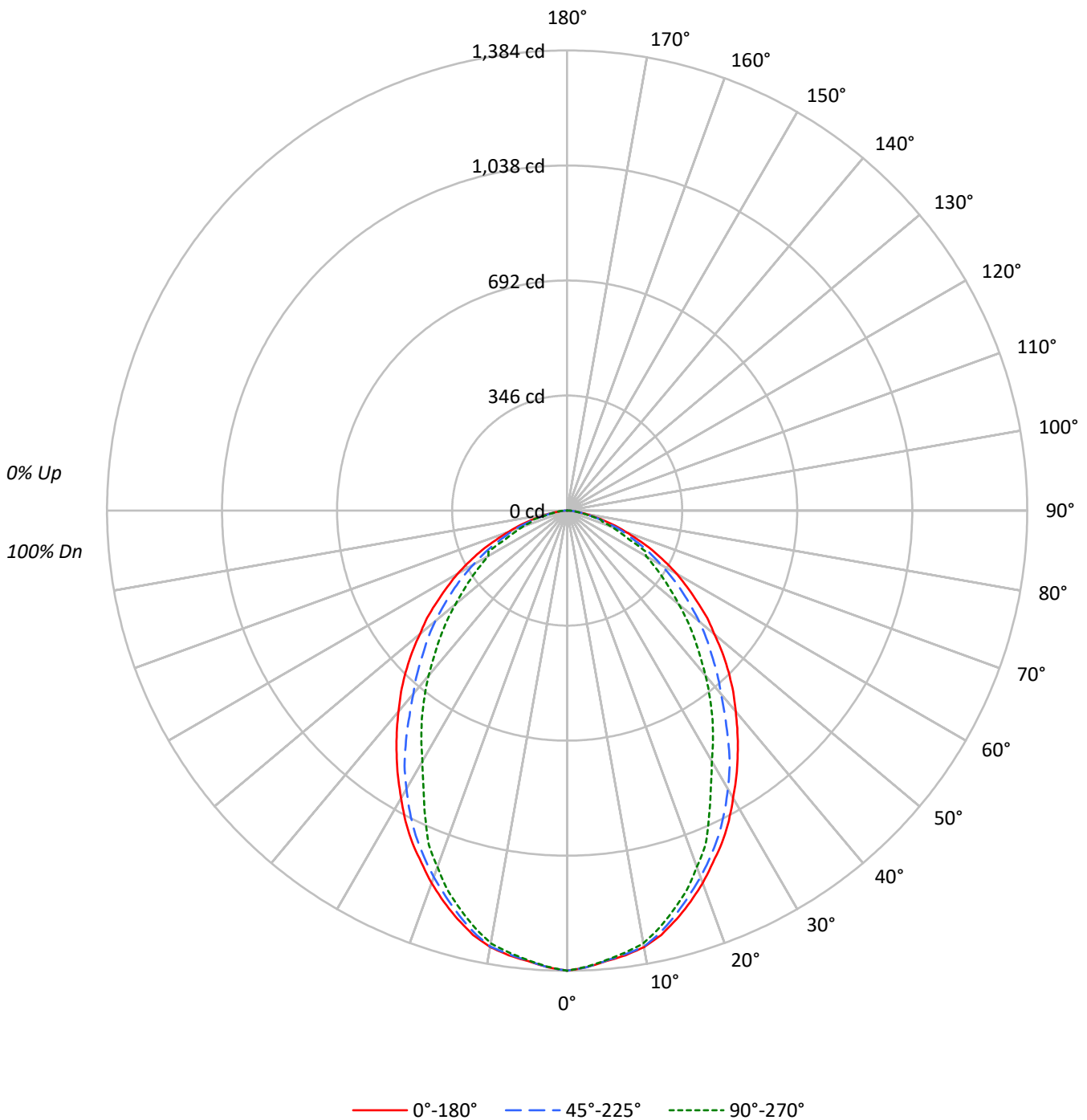
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20																		
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°	1862	1862	1862
5°	1837	1835	1833
10°	1821	1819	1806
15°	1772	1754	1729
20°	1707	1679	1633
25°	1637	1601	1501
30°	1551	1501	1352
35°	1469	1388	1251
40°	1385	1265	1138
45°	1306	1169	1029
50°	1209	1085	918
55°	1118	983	822
60°	1025	878	736
65°	902	769	652
70°	743	673	554
75°	591	516	541
80°	397	372	347
85°	247	296	346

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1306 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	128.8	4.7
10°-20°	353.6	13.0
20°-30°	489.5	18.0
30°-40°	521.9	19.2
40°-50°	476.2	17.5
50°-60°	373.0	13.7
60°-70°	243.1	8.9
70°-80°	107.7	4.0
80°-90°	23.1	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°	971.9	35.8
0°-40°	1493.8	55.0
0°-60°	2343.0	86.2
0°-90°	2717.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2717.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1384	1384	1384	1384	1384	
5°	1360	1358	1358	1357	1357	129
15°	1272	1272	1259	1246	1242	358
25°	1102	1096	1078	1040	1011	506
35°	894	888	845	781	762	559
45°	686	672	614	563	541	529
55°	477	462	419	370	350	428
65°	283	267	242	246	205	279
75°	114	106	99	94	104	122
85°	16	18	19	21	22	22
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1384.0	1384.0	1384.0	1384.0	1384.0
2.5°	1374.4	1374.4	1374.4	1372.8	1372.8
5°	1360.0	1358.4	1358.4	1356.8	1356.8
7.5°	1348.8	1347.2	1345.6	1344.0	1340.8
10°	1332.8	1332.8	1331.2	1323.2	1321.6
12.5°	1307.2	1305.6	1299.2	1288.0	1284.8
15°	1272.0	1272.0	1259.2	1246.4	1241.6
17.5°	1233.6	1232.0	1216.0	1203.2	1196.8
20°	1192.0	1188.8	1172.8	1152.0	1140.8
22.5°	1145.6	1145.6	1126.4	1099.2	1088.0
25°	1102.4	1096.0	1078.4	1040.0	1011.2
27.5°	1052.8	1043.2	1024.0	969.6	936.0
30°	998.4	993.6	966.4	896.0	870.4
32.5°	947.2	939.2	910.4	836.8	816.0
35°	894.4	888.0	844.8	780.8	761.6
37.5°	841.6	833.6	779.2	728.0	704.0
40°	788.8	779.2	720.0	673.6	648.0
42.5°	739.2	726.4	668.8	619.2	590.4
45°	686.4	672.0	614.4	563.2	540.8
47.5°	633.6	620.8	568.0	515.2	489.6
50°	577.6	566.4	518.4	465.6	438.4
52.5°	531.2	513.6	467.2	414.4	392.0
55°	476.8	462.4	419.2	369.6	350.4
57.5°	427.2	412.8	372.8	326.4	310.4
60°	380.8	360.0	326.4	286.4	273.6
62.5°	329.6	313.6	284.8	251.2	267.2
65°	283.2	267.2	241.6	246.4	204.8
67.5°	232.0	224.0	201.6	179.2	172.8
70°	188.8	179.2	171.2	147.2	140.8
72.5°	150.4	140.8	129.6	116.8	112.0
75°	113.6	105.6	99.2	94.4	104.0
77.5°	78.4	75.2	70.4	65.6	64.0
80°	51.2	49.6	48.0	46.4	44.8
82.5°	30.4	30.4	30.4	30.4	30.4
85°	16.0	17.6	19.2	20.8	22.4
87.5°	9.6	9.6	11.2	12.8	14.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)