

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: P562189

Luminaire Tested: FSR-24-4-LD4-1LO-40-UNV-81-96-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562189
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-40-UNV-81-96-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2772.0 lumens
Efficiency: N/A
Efficacy: 118.5 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

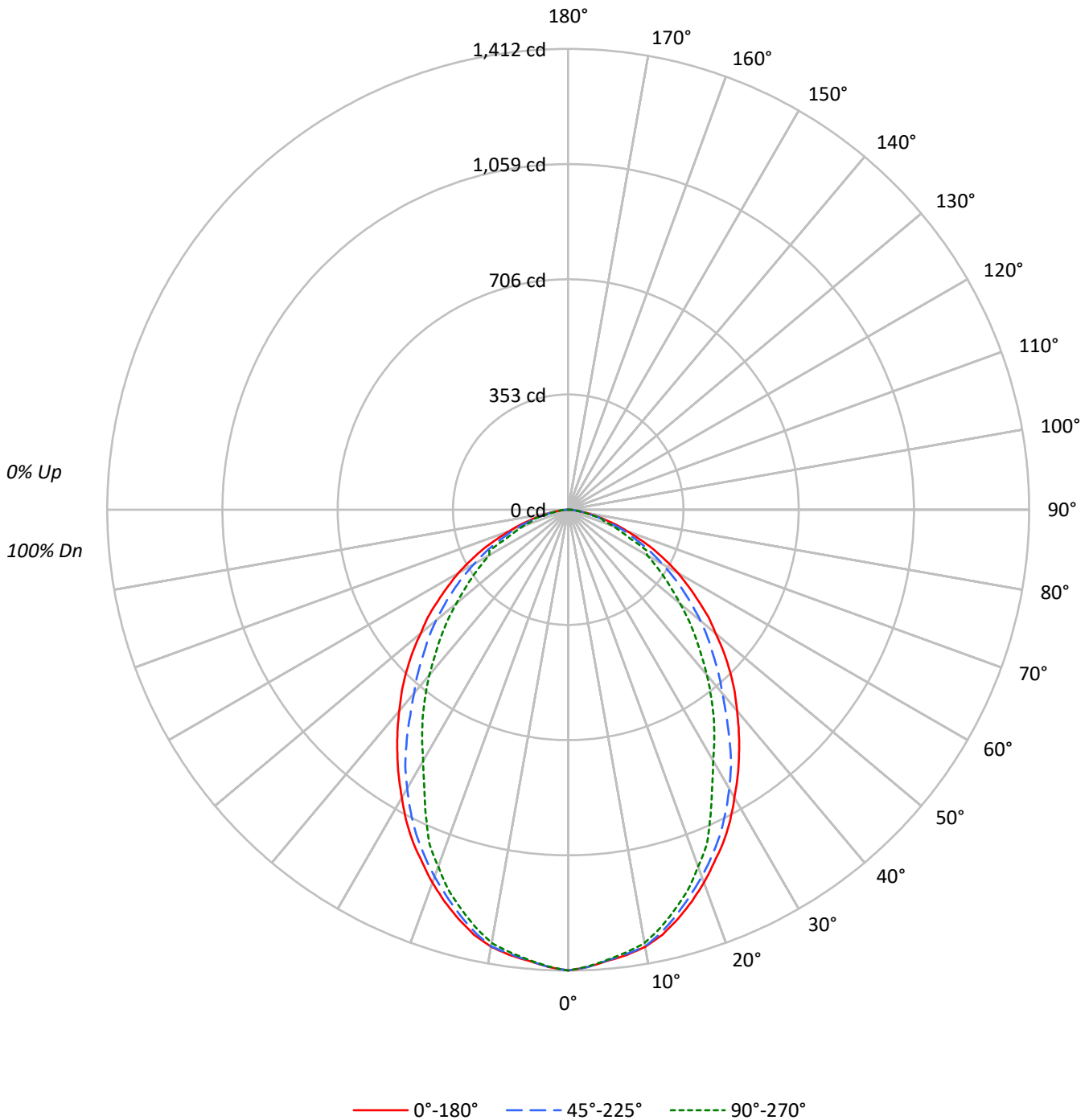
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					20					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°	1900	1900	1900
5°	1874	1872	1870
10°	1858	1856	1842
15°	1808	1790	1764
20°	1741	1713	1667
25°	1670	1633	1532
30°	1583	1532	1380
35°	1499	1416	1276
40°	1414	1290	1161
45°	1333	1193	1050
50°	1234	1107	936
55°	1141	1003	839
60°	1045	896	751
65°	920	785	665
70°	758	687	565
75°	603	526	552
80°	404	380	354
85°	252	303	354

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1333 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	131.4	4.7
10°-20°	360.7	13.0
20°-30°	499.4	18.0
30°-40°	532.5	19.2
40°-50°	485.8	17.5
50°-60°	380.6	13.7
60°-70°	248.0	8.9
70°-80°	109.9	4.0
80°-90°	23.6	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°	991.6	35.8
0°-40°	1524.1	55.0
0°-60°	2390.5	86.2
0°-90°	2772.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2772.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1412	1412	1412	1412	1412	
5°	1388	1386	1386	1384	1384	132
15°	1298	1298	1285	1272	1267	365
25°	1125	1118	1100	1061	1032	516
35°	912	906	862	797	777	570
45°	700	686	627	575	552	539
55°	486	472	428	377	358	436
65°	289	273	246	251	209	285
75°	116	108	101	96	106	124
85°	16	18	20	21	23	23
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1412.0	1412.0	1412.0	1412.0	1412.0
2.5°	1402.2	1402.2	1402.2	1400.6	1400.6
5°	1387.5	1385.9	1385.9	1384.3	1384.3
7.5°	1376.1	1374.5	1372.8	1371.2	1367.9
10°	1359.8	1359.8	1358.2	1350.0	1348.4
12.5°	1333.7	1332.0	1325.5	1314.1	1310.8
15°	1297.8	1297.8	1284.7	1271.6	1266.7
17.5°	1258.6	1256.9	1240.6	1227.6	1221.0
20°	1216.1	1212.9	1196.5	1175.3	1163.9
22.5°	1168.8	1168.8	1149.2	1121.5	1110.0
25°	1124.7	1118.2	1100.2	1061.1	1031.7
27.5°	1074.1	1064.3	1044.7	989.2	954.9
30°	1018.6	1013.7	986.0	914.1	888.0
32.5°	966.4	958.2	928.8	853.7	832.5
35°	912.5	906.0	861.9	796.6	777.0
37.5°	858.6	850.5	795.0	742.7	718.3
40°	804.8	795.0	734.6	687.2	661.1
42.5°	754.2	741.1	682.3	631.7	602.4
45°	700.3	685.6	626.8	574.6	551.7
47.5°	646.4	633.4	579.5	525.6	499.5
50°	589.3	577.9	528.9	475.0	447.3
52.5°	542.0	524.0	476.7	422.8	399.9
55°	486.5	471.8	427.7	377.1	357.5
57.5°	435.8	421.2	380.3	333.0	316.7
60°	388.5	367.3	333.0	292.2	279.1
62.5°	336.3	319.9	290.6	256.3	272.6
65°	288.9	272.6	246.5	251.4	208.9
67.5°	236.7	228.5	205.7	182.8	176.3
70°	192.6	182.8	174.7	150.2	143.7
72.5°	153.4	143.7	132.2	119.2	114.3
75°	115.9	107.7	101.2	96.3	106.1
77.5°	80.0	76.7	71.8	66.9	65.3
80°	52.2	50.6	49.0	47.3	45.7
82.5°	31.0	31.0	31.0	31.0	31.0
85°	16.3	18.0	19.6	21.2	22.9
87.5°	9.8	9.8	11.4	13.1	14.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)