

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: P562328

Luminaire Tested: FSR-24-4-LD4-1STD-35-UNV-82-88-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562328
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-82-88-EDD-90
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2564.0 lumens
Efficiency: N/A
Efficacy: 77.0 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

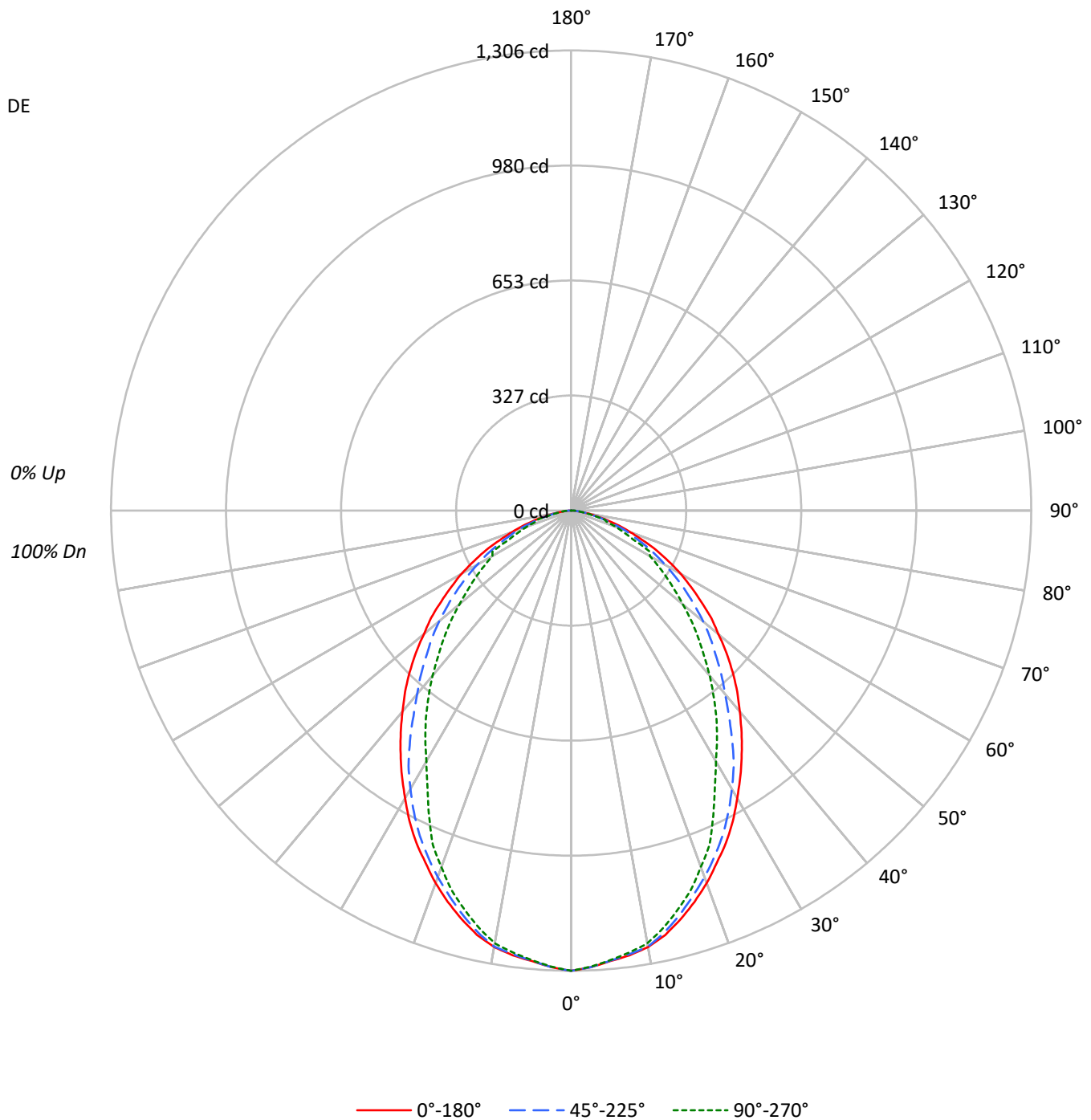
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	1757	1757	1757
5°	1733	1731	1729
10°	1718	1716	1704
15°	1672	1655	1632
20°	1611	1585	1542
25°	1544	1511	1417
30°	1464	1417	1276
35°	1386	1309	1180
40°	1307	1193	1074
45°	1232	1103	971
50°	1141	1024	866
55°	1056	928	776
60°	967	829	695
65°	851	726	615
70°	701	636	523
75°	557	487	510
80°	374	351	328
85°	233	279	326

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1232 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	121.6	4.7
10°-20°	333.7	13.0
20°-30°	461.9	18.0
30°-40°	492.5	19.2
40°-50°	449.3	17.5
50°-60°	352.0	13.7
60°-70°	229.4	8.9
70°-80°	101.7	4.0
80°-90°	21.8	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°	917.2	35.8
0°-40°	1409.7	55.0
0°-60°	2211.1	86.2
0°-90°	2564.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2564.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1306	1306	1306	1306	1306	
5°	1283	1282	1282	1280	1280	122
15°	1200	1200	1188	1176	1172	337
25°	1040	1034	1018	981	954	478
35°	844	838	797	737	719	528
45°	648	634	580	532	510	499
55°	450	436	396	349	331	404
65°	267	252	228	232	193	263
75°	107	100	94	89	98	115
85°	15	17	18	20	21	21
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1306.1	1306.1	1306.1	1306.1	1306.1
2.5°	1297.0	1297.0	1297.0	1295.5	1295.5
5°	1283.4	1281.9	1281.9	1280.4	1280.4
7.5°	1272.8	1271.3	1269.8	1268.3	1265.3
10°	1257.8	1257.8	1256.2	1248.7	1247.2
12.5°	1233.6	1232.1	1226.0	1215.5	1212.5
15°	1200.4	1200.4	1188.3	1176.2	1171.7
17.5°	1164.1	1162.6	1147.5	1135.4	1129.4
20°	1124.9	1121.9	1106.8	1087.1	1076.6
22.5°	1081.1	1081.1	1063.0	1037.3	1026.7
25°	1040.3	1034.3	1017.7	981.4	954.3
27.5°	993.5	984.5	966.3	915.0	883.3
30°	942.2	937.7	912.0	845.5	821.4
32.5°	893.9	886.3	859.1	789.7	770.1
35°	844.0	838.0	797.2	736.8	718.7
37.5°	794.2	786.7	735.3	687.0	664.4
40°	744.4	735.3	679.5	635.7	611.5
42.5°	697.6	685.5	631.1	584.3	557.2
45°	647.7	634.2	579.8	531.5	510.3
47.5°	597.9	585.8	536.0	486.2	462.0
50°	545.1	534.5	489.2	439.4	413.7
52.5°	501.3	484.7	440.9	391.1	369.9
55°	450.0	436.4	395.6	348.8	330.7
57.5°	403.1	389.6	351.8	308.0	292.9
60°	359.4	339.7	308.0	270.3	258.2
62.5°	311.0	295.9	268.8	237.1	252.2
65°	267.3	252.2	228.0	232.5	193.3
67.5°	218.9	211.4	190.2	169.1	163.1
70°	178.2	169.1	161.6	138.9	132.9
72.5°	141.9	132.9	122.3	110.2	105.7
75°	107.2	99.7	93.6	89.1	98.1
77.5°	74.0	71.0	66.4	61.9	60.4
80°	48.3	46.8	45.3	43.8	42.3
82.5°	28.7	28.7	28.7	28.7	28.7
85°	15.1	16.6	18.1	19.6	21.1
87.5°	9.1	9.1	10.6	12.1	13.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)