

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: P590336

Luminaire Tested: FSR-24-2-LD4-2STD-35-UNV-81-87-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590336
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-1)
Test Lab: INNOVATION CENTER
Issue Date: 12/8/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-24-2-LD4-2STD-35-UNV-81-87-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3476.0 lumens
Efficiency: N/A
Efficacy: 104.4 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

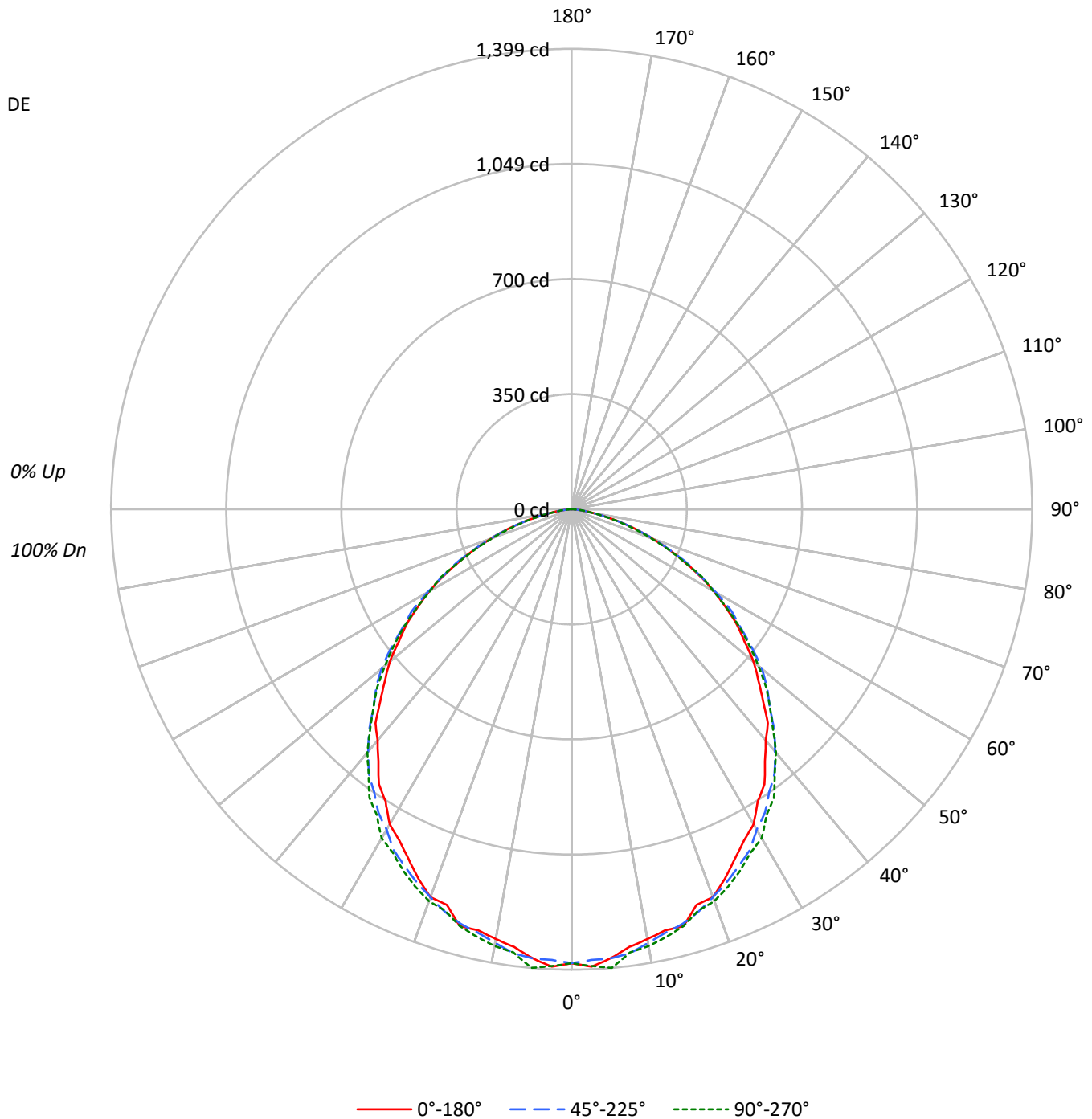
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	110	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3711	3711	3711
5°	3699	3700	3779
10°	3624	3656	3681
15°	3653	3633	3653
20°	3591	3591	3629
25°	3481	3557	3596
30°	3433	3493	3586
35°	3352	3440	3517
40°	3222	3377	3392
45°	3124	3235	3240
50°	3021	3158	3098
55°	2879	2935	2914
60°	2692	2719	2670
65°	2401	2462	2383
70°	2060	2067	2009
75°	1631	1627	1565
80°	1093	1063	1021
85°	593	590	550

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 3318 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	129.7	3.7
10°-20°	367.7	10.6
20°-30°	550.9	15.8
30°-40°	652.9	18.8
40°-50°	654.1	18.8
50°-60°	555.2	16.0
60°-70°	374.3	10.8
70°-80°	164.5	4.7
80°-90°	26.7	0.8
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°	1048.3	30.2
0°-40°	1701.2	48.9
0°-60°	2910.4	83.7
0°-90°	3476.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3476.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1379	1379	1379	1379	1379	
5°	1369	1366	1370	1366	1399	129
15°	1311	1296	1304	1311	1311	365
25°	1172	1179	1198	1214	1211	542
35°	1020	1023	1047	1071	1071	634
45°	821	836	850	872	851	635
55°	614	610	626	621	621	546
65°	377	372	387	372	374	375
75°	157	154	156	146	150	168
85°	19	19	19	18	18	28
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1379.2	1379.2	1379.2	1379.2	1379.2
2.5°	1391.1	1380.6	1370.8	1382.2	1389.2
5°	1369.4	1366.2	1369.9	1365.8	1398.8
7.5°	1341.3	1353.5	1360.7	1356.2	1358.2
10°	1326.3	1322.0	1337.9	1348.9	1347.3
12.5°	1310.3	1316.7	1317.6	1329.5	1330.6
15°	1311.2	1296.0	1304.0	1310.8	1311.3
17.5°	1260.2	1276.6	1282.1	1297.6	1278.4
20°	1254.0	1242.1	1254.0	1269.9	1267.4
22.5°	1215.7	1202.4	1228.0	1242.1	1241.2
25°	1172.3	1178.7	1197.9	1213.6	1211.1
27.5°	1134.2	1141.6	1169.1	1190.6	1176.7
30°	1104.8	1101.0	1124.2	1143.4	1154.1
32.5°	1052.2	1065.8	1092.8	1111.9	1101.7
35°	1020.4	1023.4	1047.1	1071.3	1070.6
37.5°	964.6	978.7	1012.0	1018.8	1012.5
40°	917.1	931.2	961.2	968.5	965.5
42.5°	882.0	884.5	910.3	918.7	905.3
45°	820.9	836.2	850.1	872.0	851.4
47.5°	768.9	776.0	806.0	811.8	801.0
50°	721.7	724.2	754.3	747.0	739.9
52.5°	662.4	672.9	689.9	688.4	680.1
55°	613.6	609.5	625.6	621.3	621.1
57.5°	555.1	562.2	575.4	568.6	557.7
60°	500.2	500.4	505.2	497.5	496.1
62.5°	439.1	441.3	442.3	432.9	448.2
65°	377.0	372.0	386.6	371.8	374.3
67.5°	319.8	322.3	320.9	311.6	315.2
70°	261.8	265.0	262.7	252.2	255.4
72.5°	208.7	204.8	207.3	194.1	200.2
75°	156.9	153.7	156.5	145.5	150.5
77.5°	106.8	109.3	107.6	101.7	105.1
80°	70.5	68.6	68.6	65.2	65.9
82.5°	41.1	39.2	38.6	37.6	39.2
85°	19.2	18.7	19.1	18.5	17.8
87.5°	6.9	7.1	7.1	6.8	6.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)