

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: P590408

Luminaire Tested: FSR-24-2-LD4-2STD-50-UNV-82-87-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590408
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-50-UNV-82-87-EDD
Description: 2X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3495.0 lumens
Efficiency: N/A
Efficacy: 105.0 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

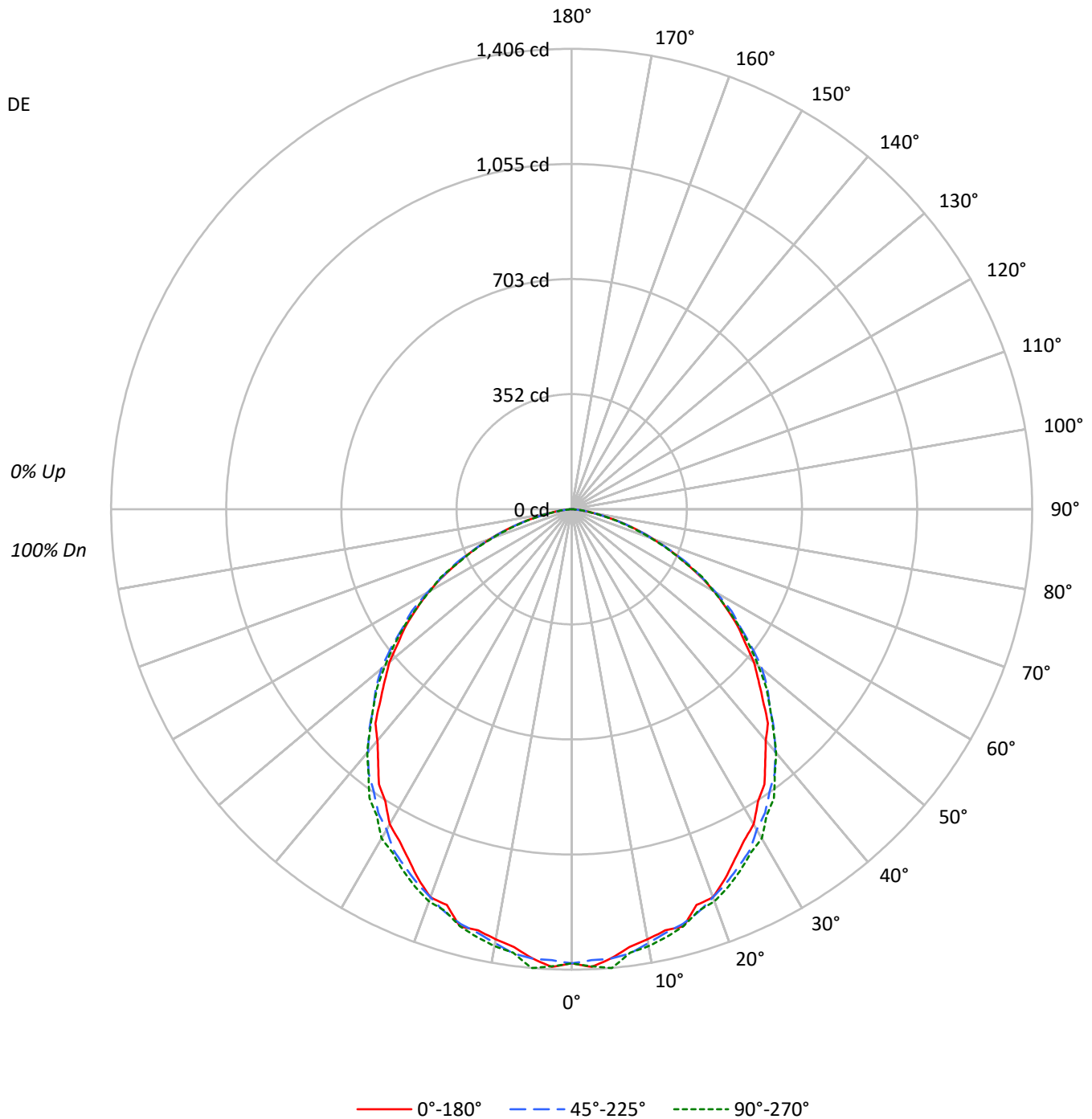
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	3732	3732	3732
5°	3719	3721	3799
10°	3644	3676	3702
15°	3673	3653	3673
20°	3611	3611	3649
25°	3500	3576	3616
30°	3452	3512	3606
35°	3370	3459	3536
40°	3239	3395	3410
45°	3141	3253	3258
50°	3038	3175	3114
55°	2895	2951	2930
60°	2707	2734	2685
65°	2413	2475	2397
70°	2071	2078	2020
75°	1640	1637	1573
80°	1099	1068	1026
85°	596	593	553

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 3337 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	130.4	3.7
10°-20°	369.7	10.6
20°-30°	553.9	15.8
30°-40°	656.4	18.8
40°-50°	657.7	18.8
50°-60°	558.3	16.0
60°-70°	376.4	10.8
70°-80°	165.4	4.7
80°-90°	26.9	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°	1054.0	30.2
0°-40°	1710.5	48.9
0°-60°	2926.4	83.7
0°-90°	3495.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3495.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1387	1387	1387	1387	1387	
5°	1377	1374	1377	1373	1406	130
15°	1318	1303	1311	1318	1318	367
25°	1179	1185	1204	1220	1218	545
35°	1026	1029	1053	1077	1076	637
45°	825	841	855	877	856	638
55°	617	613	629	625	624	549
65°	379	374	389	374	376	377
75°	158	154	157	146	151	169
85°	19	19	19	19	18	28
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1386.7	1386.7	1386.7	1386.7	1386.7
2.5°	1398.7	1388.2	1378.3	1389.8	1396.8
5°	1376.9	1373.7	1377.4	1373.3	1406.4
7.5°	1348.6	1360.9	1368.1	1363.6	1365.6
10°	1333.6	1329.3	1345.2	1356.3	1354.7
12.5°	1317.4	1323.9	1324.8	1336.8	1337.8
15°	1318.3	1303.1	1311.2	1318.0	1318.5
17.5°	1267.1	1283.6	1289.1	1304.7	1285.4
20°	1260.9	1248.9	1260.9	1276.8	1274.3
22.5°	1222.4	1208.9	1234.7	1248.9	1248.0
25°	1178.7	1185.1	1204.5	1220.2	1217.7
27.5°	1140.4	1147.9	1175.5	1197.1	1183.2
30°	1110.8	1107.1	1130.3	1149.7	1160.4
32.5°	1058.0	1071.6	1098.8	1118.0	1107.8
35°	1025.9	1029.0	1052.8	1077.2	1076.4
37.5°	969.9	984.0	1017.5	1024.3	1018.1
40°	922.1	936.2	966.5	973.8	970.8
42.5°	886.8	889.3	915.3	923.7	910.3
45°	825.4	840.8	854.8	876.8	856.0
47.5°	773.1	780.3	810.4	816.3	805.4
50°	725.7	728.2	758.4	751.1	743.9
52.5°	666.1	676.6	693.6	692.2	683.8
55°	617.0	612.9	629.0	624.7	624.5
57.5°	558.1	565.3	578.5	571.7	560.8
60°	502.9	503.1	508.0	500.3	498.8
62.5°	441.5	443.7	444.8	435.3	450.7
65°	379.0	374.0	388.7	373.9	376.4
67.5°	321.6	324.1	322.6	313.3	316.9
70°	263.2	266.4	264.1	253.5	256.8
72.5°	209.8	205.9	208.4	195.2	201.3
75°	157.7	154.5	157.4	146.3	151.3
77.5°	107.4	109.9	108.1	102.2	105.6
80°	70.9	68.9	68.9	65.5	66.2
82.5°	41.4	39.4	38.9	37.8	39.4
85°	19.3	18.8	19.2	18.6	17.9
87.5°	7.0	7.2	7.2	6.8	6.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)