

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: P590362

Luminaire Tested: FSR-24-2-LD4-2STD-40-UNV-80-94-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590362
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-40-UNV-80-94-EDD
Description: 2X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3951.0 lumens
Efficiency: N/A
Efficacy: 118.6 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

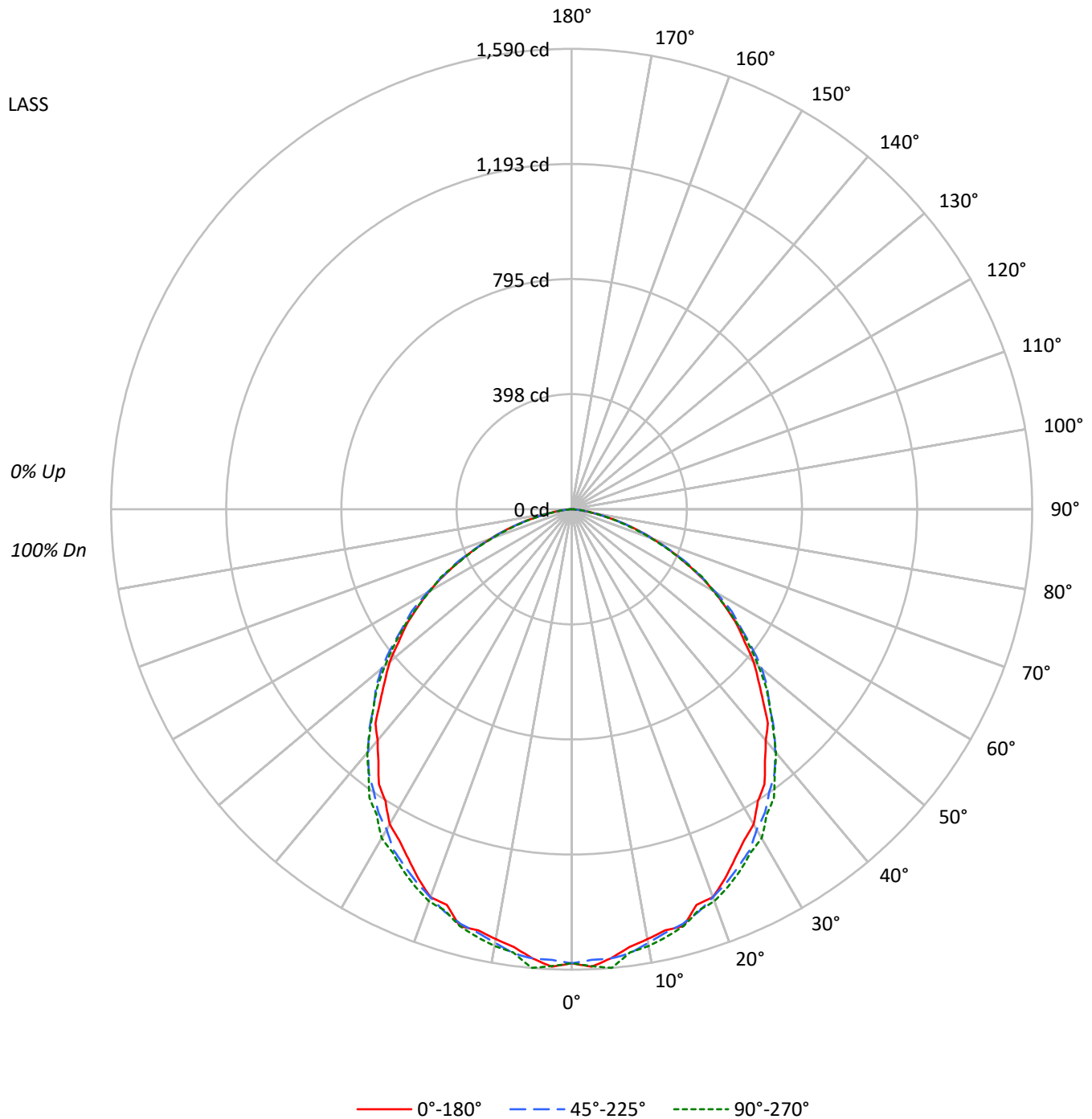
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
RC	80									70									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	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86						86													
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73						73													
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62						62													
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53						53													
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46						46													
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41						41													
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36						36													
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32						32													
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29						29													
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26						26													

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4219	4219	4219
5°	4205	4206	4295
10°	4119	4155	4185
15°	4152	4129	4152
20°	4082	4082	4125
25°	3956	4043	4087
30°	3902	3970	4076
35°	3810	3910	3998
40°	3662	3838	3855
45°	3551	3677	3683
50°	3435	3589	3521
55°	3272	3336	3312
60°	3060	3090	3035
65°	2728	2798	2709
70°	2341	2349	2284
75°	1854	1850	1778
80°	1243	1207	1161
85°	676	670	624

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 3772 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	147.5	3.7
10°-20°	417.9	10.6
20°-30°	626.1	15.8
30°-40°	742.1	18.8
40°-50°	743.5	18.8
50°-60°	631.1	16.0
60°-70°	425.5	10.8
70°-80°	187.0	4.7
80°-90°	30.4	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°	1191.5	30.2
0°-40°	1933.6	48.9
0°-60°	3308.2	83.7
0°-90°	3951.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3951.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1568	1568	1568	1568	1568	
5°	1556	1553	1557	1552	1590	147
15°	1490	1473	1482	1490	1490	415
25°	1332	1340	1362	1379	1377	616
35°	1160	1163	1190	1218	1217	720
45°	933	950	966	991	968	722
55°	698	693	711	706	706	620
65°	428	423	439	423	426	426
75°	178	175	178	165	171	191
85°	22	21	22	21	20	32
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1567.7	1567.7	1567.7	1567.7	1567.7
2.5°	1581.2	1569.3	1558.1	1571.1	1579.0
5°	1556.5	1552.9	1557.1	1552.5	1589.9
7.5°	1524.5	1538.5	1546.6	1541.5	1543.8
10°	1507.5	1502.7	1520.7	1533.2	1531.4
12.5°	1489.3	1496.6	1497.6	1511.2	1512.4
15°	1490.3	1473.1	1482.2	1489.9	1490.5
17.5°	1432.4	1451.1	1457.3	1475.0	1453.1
20°	1425.4	1411.8	1425.4	1443.4	1440.5
22.5°	1381.8	1366.7	1395.8	1411.8	1410.8
25°	1332.5	1339.7	1361.6	1379.4	1376.6
27.5°	1289.1	1297.6	1328.8	1353.3	1337.5
30°	1255.7	1251.5	1277.8	1299.7	1311.8
32.5°	1196.0	1211.4	1242.2	1263.8	1252.3
35°	1159.8	1163.2	1190.2	1217.7	1216.9
37.5°	1096.4	1112.4	1150.3	1158.0	1150.9
40°	1042.4	1058.4	1092.6	1100.9	1097.5
42.5°	1002.5	1005.4	1034.7	1044.2	1029.0
45°	933.1	950.5	966.3	991.2	967.7
47.5°	874.0	882.1	916.1	922.8	910.4
50°	820.4	823.2	857.4	849.1	841.0
52.5°	753.0	764.9	784.1	782.5	773.0
55°	697.5	692.8	711.1	706.2	706.0
57.5°	630.9	639.0	654.0	646.3	633.9
60°	568.6	568.8	574.2	565.5	563.9
62.5°	499.1	501.6	502.8	492.1	509.5
65°	428.5	422.8	439.4	422.6	425.5
67.5°	363.5	366.4	364.7	354.2	358.3
70°	297.5	301.2	298.6	286.6	290.3
72.5°	237.2	232.8	235.6	220.6	227.5
75°	178.3	174.7	177.9	165.4	171.0
77.5°	121.4	124.3	122.3	115.6	119.4
80°	80.2	77.9	77.9	74.1	74.9
82.5°	46.8	44.5	43.9	42.7	44.5
85°	21.9	21.3	21.7	21.1	20.2
87.5°	7.9	8.1	8.1	7.7	7.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)