

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: P590360

Luminaire Tested: FSR-24-2-LD4-2STD-40-UNV-80-87-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590360
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-80-87-EDD
Description: 2X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR PC ENVIRONM
SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3696.0 lumens
Efficiency: N/A
Efficacy: 111.0 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

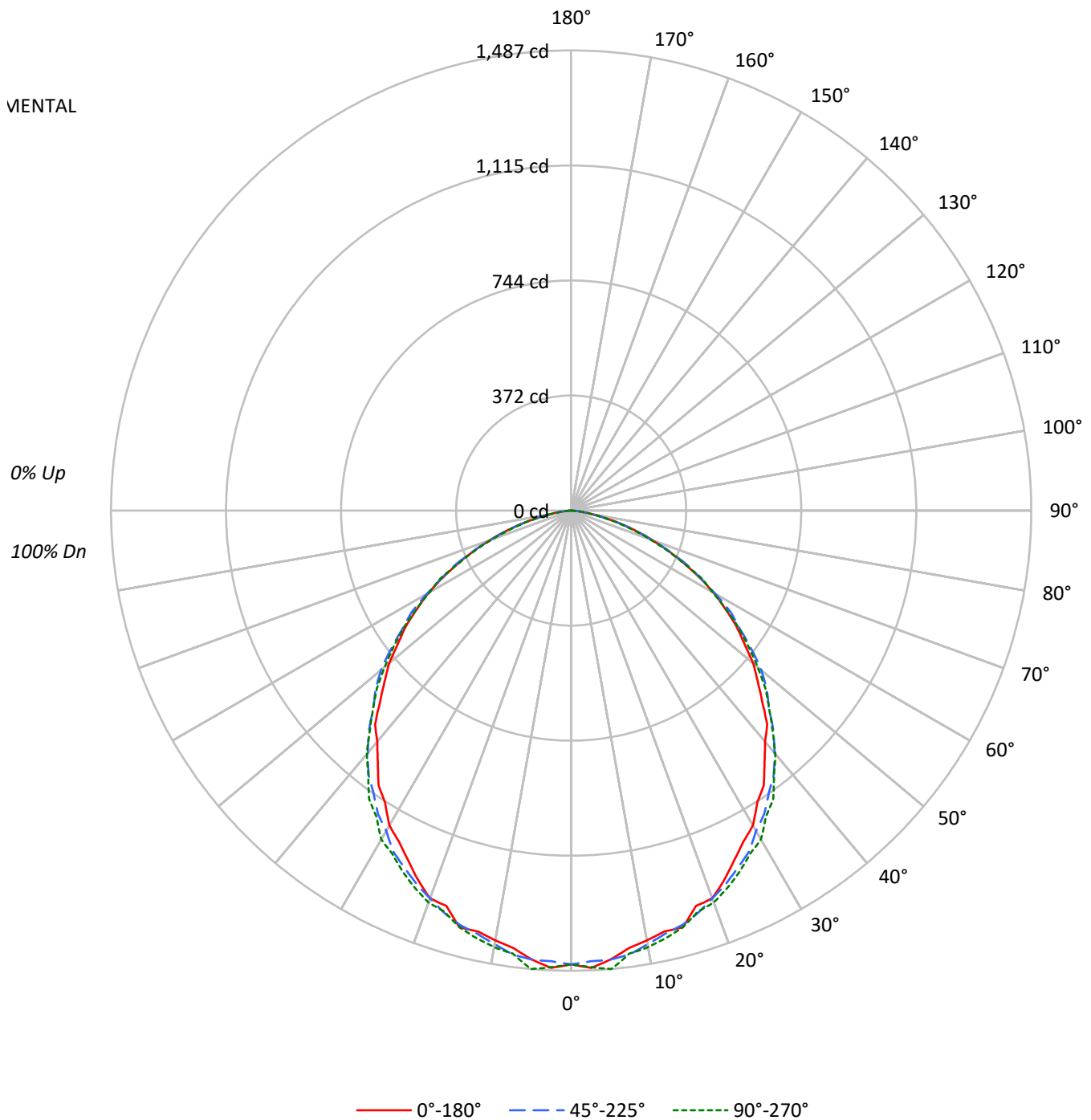
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P590360

CATALOG NUMBER: FSR-24-2-LD4-2STD-40-UNV-80-87-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P590360

CATALOG NUMBER: FSR-24-2-LD4-2STD-40-UNV-80-87-EDD

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	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°	3946	3946	3946
5°	3933	3935	4018
10°	3853	3887	3915
15°	3884	3863	3884
20°	3818	3818	3859
25°	3701	3782	3823
30°	3650	3714	3813
35°	3564	3658	3739
40°	3425	3590	3606
45°	3322	3440	3445
50°	3213	3358	3293
55°	3061	3121	3098
60°	2863	2891	2839
65°	2552	2618	2534
70°	2190	2198	2136
75°	1734	1730	1664
80°	1162	1130	1086
85°	630	627	584

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 3529 cd/sqm



TEST NUMBER: P590360

CATALOG NUMBER: FSR-24-2-LD4-2STD-40-UNV-80-87-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	137.9	3.7
10°-20°	391.0	10.6
20°-30°	585.7	15.8
30°-40°	694.2	18.8
40°-50°	695.5	18.8
50°-60°	590.4	16.0
60°-70°	398.0	10.8
70°-80°	174.9	4.7
80°-90°	28.4	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°	1114.6	30.2
0°-40°	1808.8	48.9
0°-60°	3094.7	83.7
0°-90°	3696.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3696.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1466	1466	1466	1466	1466	
5°	1456	1453	1457	1452	1487	137
15°	1394	1378	1387	1394	1394	388
25°	1246	1253	1274	1290	1288	576
35°	1085	1088	1113	1139	1138	674
45°	873	889	904	927	905	675
55°	652	648	665	661	660	580
65°	401	396	411	395	398	399
75°	167	163	166	155	160	179
85°	20	20	20	20	19	30
90°	0	0	0	0	0	



TEST NUMBER: P590360

CATALOG NUMBER: FSR-24-2-LD4-2STD-40-UNV-80-87-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1466.5	1466.5	1466.5	1466.5	1466.5
2.5°	1479.2	1468.0	1457.6	1469.7	1477.1
5°	1456.1	1452.7	1456.6	1452.3	1487.3
7.5°	1426.1	1439.2	1446.8	1442.1	1444.1
10°	1410.2	1405.7	1422.6	1434.3	1432.6
12.5°	1393.2	1400.0	1401.0	1413.7	1414.8
15°	1394.1	1378.1	1386.6	1393.8	1394.3
17.5°	1340.0	1357.4	1363.3	1379.8	1359.3
20°	1333.4	1320.7	1333.4	1350.2	1347.6
22.5°	1292.7	1278.5	1305.7	1320.7	1319.7
25°	1246.5	1253.3	1273.7	1290.4	1287.7
27.5°	1205.9	1213.9	1243.1	1266.0	1251.2
30°	1174.7	1170.7	1195.3	1215.8	1227.1
32.5°	1118.8	1133.2	1162.0	1182.3	1171.5
35°	1084.9	1088.2	1113.4	1139.1	1138.3
37.5°	1025.7	1040.6	1076.0	1083.2	1076.6
40°	975.1	990.1	1022.1	1029.8	1026.6
42.5°	937.8	940.5	967.9	976.8	962.6
45°	872.9	889.2	903.9	927.2	905.3
47.5°	817.6	825.2	857.0	863.2	851.7
50°	767.4	770.1	802.1	794.3	786.7
52.5°	704.4	715.5	733.5	732.0	723.1
55°	652.5	648.1	665.2	660.6	660.4
57.5°	590.2	597.8	611.8	604.6	593.0
60°	531.9	532.1	537.2	529.0	527.5
62.5°	466.9	469.2	470.3	460.3	476.6
65°	400.8	395.5	411.1	395.4	398.0
67.5°	340.1	342.7	341.2	331.4	335.1
70°	278.3	281.7	279.3	268.1	271.5
72.5°	221.9	217.7	220.4	206.4	212.8
75°	166.8	163.4	166.4	154.7	160.0
77.5°	113.6	116.3	114.4	108.1	111.7
80°	75.0	72.9	72.9	69.3	70.1
82.5°	43.7	41.7	41.1	40.0	41.7
85°	20.4	19.9	20.3	19.7	18.9
87.5°	7.4	7.6	7.6	7.2	6.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)