

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: P590564

Luminaire Tested: FSR-24-2-LD4-3LO-40-UNV-81-97-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590564
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-LD4-3LO-40-UNV-81-97-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4008.0 lumens
Efficiency: N/A
Efficacy: 114.2 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

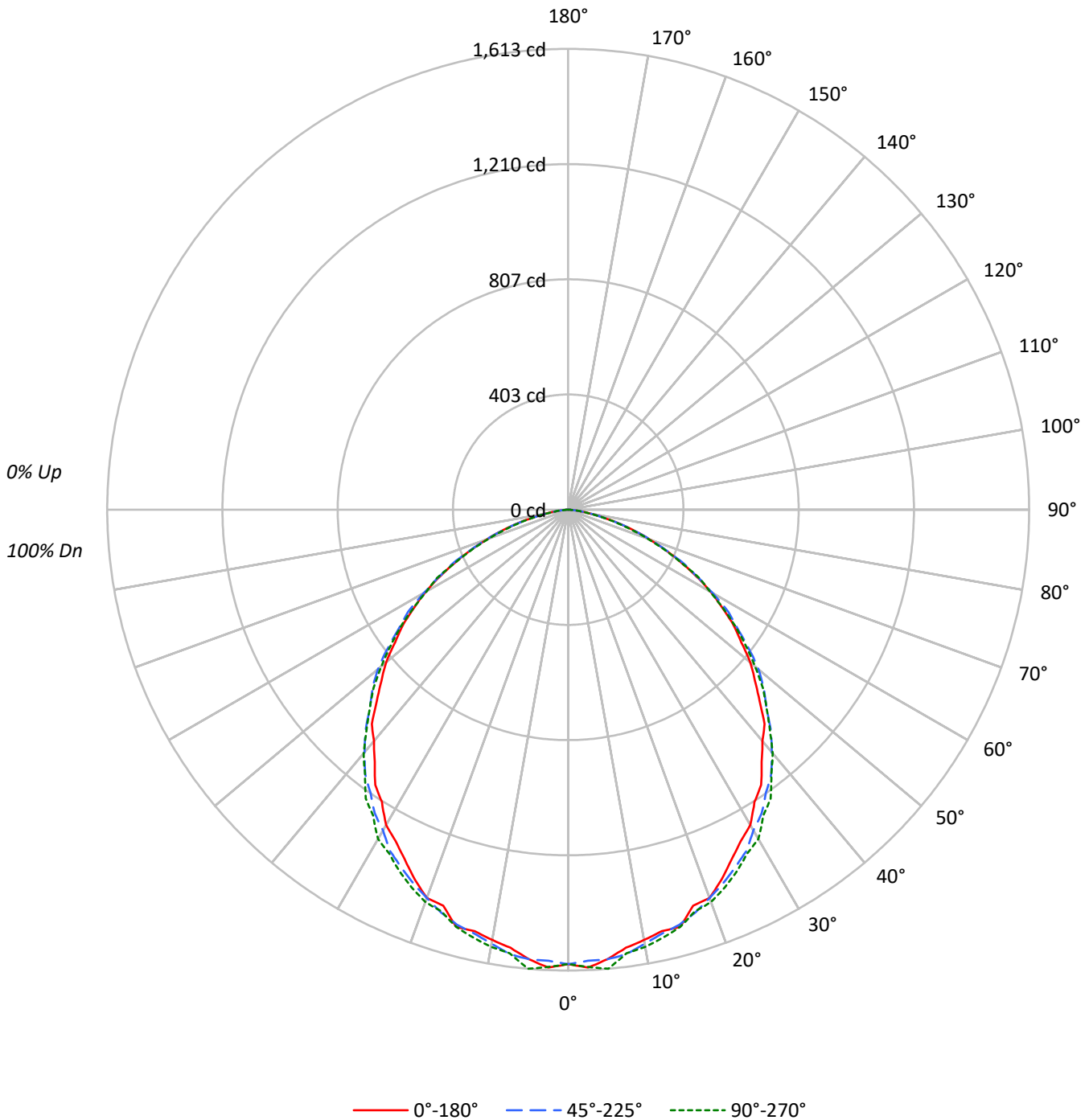
Input Watts (W): 35.1
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	4279	4279	4279
5°	4265	4267	4357
10°	4179	4215	4245
15°	4212	4189	4212
20°	4141	4141	4185
25°	4013	4101	4146
30°	3958	4028	4135
35°	3865	3966	4055
40°	3714	3894	3911
45°	3602	3730	3736
50°	3484	3641	3571
55°	3320	3384	3360
60°	3104	3135	3078
65°	2768	2839	2748
70°	2375	2383	2316
75°	1881	1877	1804
80°	1260	1226	1178
85°	685	679	633

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 3827 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	149.6	3.7
10°-20°	424.0	10.6
20°-30°	635.2	15.8
30°-40°	752.8	18.8
40°-50°	754.2	18.8
50°-60°	640.2	16.0
60°-70°	431.6	10.8
70°-80°	189.7	4.7
80°-90°	30.8	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°	1208.7	30.2
0°-40°	1961.5	48.9
0°-60°	3355.9	83.7
0°-90°	4008.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4008.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1590	1590	1590	1590	1590	
5°	1579	1575	1580	1575	1613	149
15°	1512	1494	1504	1511	1512	421
25°	1352	1359	1381	1399	1396	625
35°	1176	1180	1207	1235	1234	730
45°	947	964	980	1006	982	732
55°	708	703	721	716	716	629
65°	435	429	446	429	432	432
75°	181	177	180	168	174	194
85°	22	22	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°	1590.3	1590.3	1590.3	1590.3	1590.3
2.5°	1604.0	1591.9	1580.6	1593.8	1601.8
5°	1579.0	1575.3	1579.6	1574.9	1612.9
7.5°	1546.5	1560.7	1568.9	1563.8	1566.0
10°	1529.3	1524.4	1542.6	1555.4	1553.5
12.5°	1510.8	1518.2	1519.2	1533.0	1534.2
15°	1511.8	1494.4	1503.6	1511.4	1512.0
17.5°	1453.1	1472.0	1478.4	1496.2	1474.1
20°	1445.9	1432.2	1445.9	1464.2	1461.3
22.5°	1401.8	1386.4	1415.9	1432.2	1431.1
25°	1351.7	1359.1	1381.2	1399.3	1396.4
27.5°	1307.7	1316.4	1348.0	1372.8	1356.8
30°	1273.9	1269.5	1296.2	1318.4	1330.7
32.5°	1213.3	1228.9	1260.1	1282.1	1270.4
35°	1176.5	1180.0	1207.3	1235.3	1234.4
37.5°	1112.3	1128.5	1166.9	1174.7	1167.5
40°	1057.4	1073.7	1108.4	1116.8	1113.3
42.5°	1017.0	1019.9	1049.6	1059.3	1043.9
45°	946.6	964.2	980.2	1005.5	981.7
47.5°	886.6	894.8	929.3	936.1	923.6
50°	832.2	835.1	869.8	861.4	853.1
52.5°	763.8	775.9	795.4	793.8	784.2
55°	707.6	702.8	721.3	716.4	716.2
57.5°	640.0	648.2	663.4	655.6	643.1
60°	576.8	577.0	582.5	573.7	572.0
62.5°	506.3	508.8	510.0	499.2	516.8
65°	434.7	428.9	445.8	428.7	431.6
67.5°	368.8	371.6	370.0	359.3	363.4
70°	301.8	305.5	302.9	290.7	294.4
72.5°	240.6	236.1	239.0	223.8	230.8
75°	180.9	177.2	180.5	167.8	173.5
77.5°	123.2	126.1	124.0	117.2	121.1
80°	81.3	79.1	79.1	75.2	76.0
82.5°	47.4	45.2	44.6	43.3	45.2
85°	22.2	21.6	22.0	21.4	20.5
87.5°	8.0	8.2	8.2	7.8	7.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)