

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: P590349

Luminaire Tested: FSR-24-2-LD4-2STD-35-UNV-93-84-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590349
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-93-84-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3910.0 lumens
Efficiency: N/A
Efficacy: 117.4 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

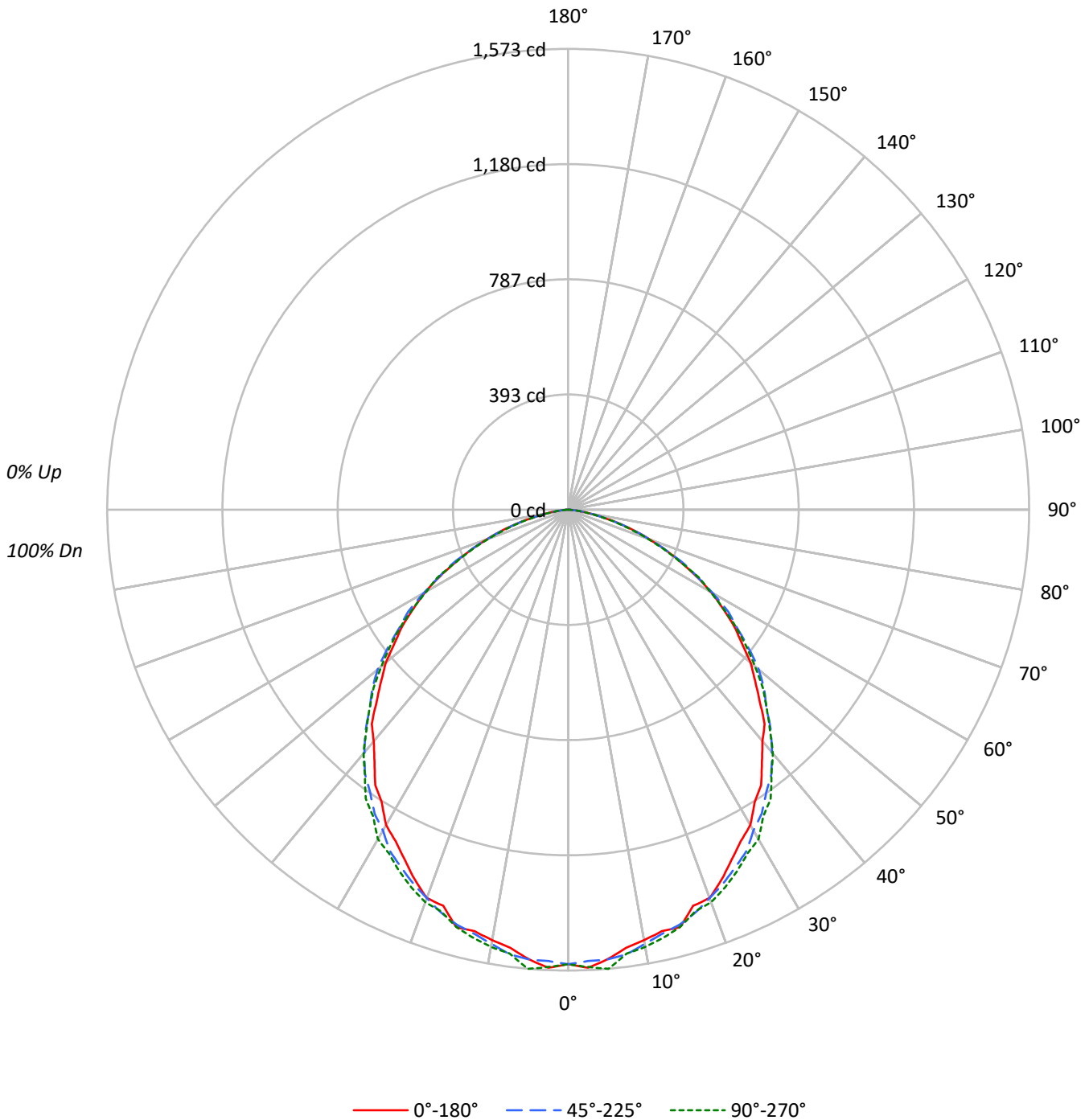
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	4175	4175	4175
5°	4161	4163	4250
10°	4077	4112	4141
15°	4109	4087	4109
20°	4040	4040	4082
25°	3915	4001	4045
30°	3861	3929	4034
35°	3771	3869	3956
40°	3624	3798	3815
45°	3514	3639	3645
50°	3399	3552	3484
55°	3239	3301	3278
60°	3028	3059	3004
65°	2700	2769	2681
70°	2317	2325	2260
75°	1835	1831	1760
80°	1229	1195	1148
85°	667	661	618

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 3733 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	145.9	3.7
10°-20°	413.6	10.6
20°-30°	619.6	15.8
30°-40°	734.4	18.8
40°-50°	735.8	18.8
50°-60°	624.6	16.0
60°-70°	421.1	10.8
70°-80°	185.0	4.7
80°-90°	30.1	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°	1179.2	30.2
0°-40°	1913.6	48.9
0°-60°	3273.9	83.7
0°-90°	3910.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3910.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1551	1551	1551	1551	1551	
5°	1540	1537	1541	1536	1573	145
15°	1475	1458	1467	1474	1475	411
25°	1319	1326	1348	1365	1362	610
35°	1148	1151	1178	1205	1204	713
45°	923	941	956	981	958	714
55°	690	686	704	699	699	614
65°	424	418	435	418	421	422
75°	176	173	176	164	169	189
85°	22	21	21	21	20	31
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1551.4	1551.4	1551.4	1551.4	1551.4
2.5°	1564.8	1553.0	1542.0	1554.8	1562.6
5°	1540.4	1536.8	1541.0	1536.4	1573.4
7.5°	1508.7	1522.5	1530.6	1525.5	1527.8
10°	1491.9	1487.1	1504.9	1517.3	1515.5
12.5°	1473.9	1481.1	1482.1	1495.5	1496.7
15°	1474.9	1457.8	1466.9	1474.5	1475.1
17.5°	1417.6	1436.0	1442.2	1459.6	1438.0
20°	1410.6	1397.2	1410.6	1428.4	1425.6
22.5°	1367.5	1352.5	1381.3	1397.2	1396.2
25°	1318.6	1325.8	1347.5	1365.1	1362.3
27.5°	1275.8	1284.2	1315.0	1339.3	1323.6
30°	1242.7	1238.5	1264.5	1286.2	1298.2
32.5°	1183.6	1198.8	1229.3	1250.7	1239.3
35°	1147.8	1151.2	1177.8	1205.1	1204.3
37.5°	1085.1	1100.9	1138.4	1146.0	1139.0
40°	1031.6	1047.4	1081.3	1089.5	1086.1
42.5°	992.1	994.9	1024.0	1033.4	1018.4
45°	923.4	940.6	956.3	980.9	957.7
47.5°	864.9	872.9	906.6	913.2	901.0
50°	811.9	814.7	848.5	840.3	832.3
52.5°	745.1	757.0	776.0	774.4	765.0
55°	690.3	685.7	703.7	698.9	698.7
57.5°	624.4	632.4	647.2	639.6	627.4
60°	562.7	562.9	568.3	559.7	558.1
62.5°	494.0	496.4	497.6	486.9	504.2
65°	424.1	418.4	434.9	418.2	421.0
67.5°	359.8	362.6	361.0	350.5	354.5
70°	294.5	298.1	295.5	283.6	287.2
72.5°	234.8	230.4	233.2	218.3	225.1
75°	176.5	172.9	176.1	163.7	169.3
77.5°	120.2	123.0	121.0	114.4	118.2
80°	79.3	77.1	77.1	73.3	74.1
82.5°	46.3	44.1	43.5	42.3	44.1
85°	21.6	21.0	21.4	20.8	20.0
87.5°	7.8	8.0	8.0	7.6	7.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)