

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: P590382

Luminaire Tested: FSR-24-2-LD4-2STD-40-UNV-93-85-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590382
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-93-85-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3871.0 lumens
Efficiency: N/A
Efficacy: 116.2 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

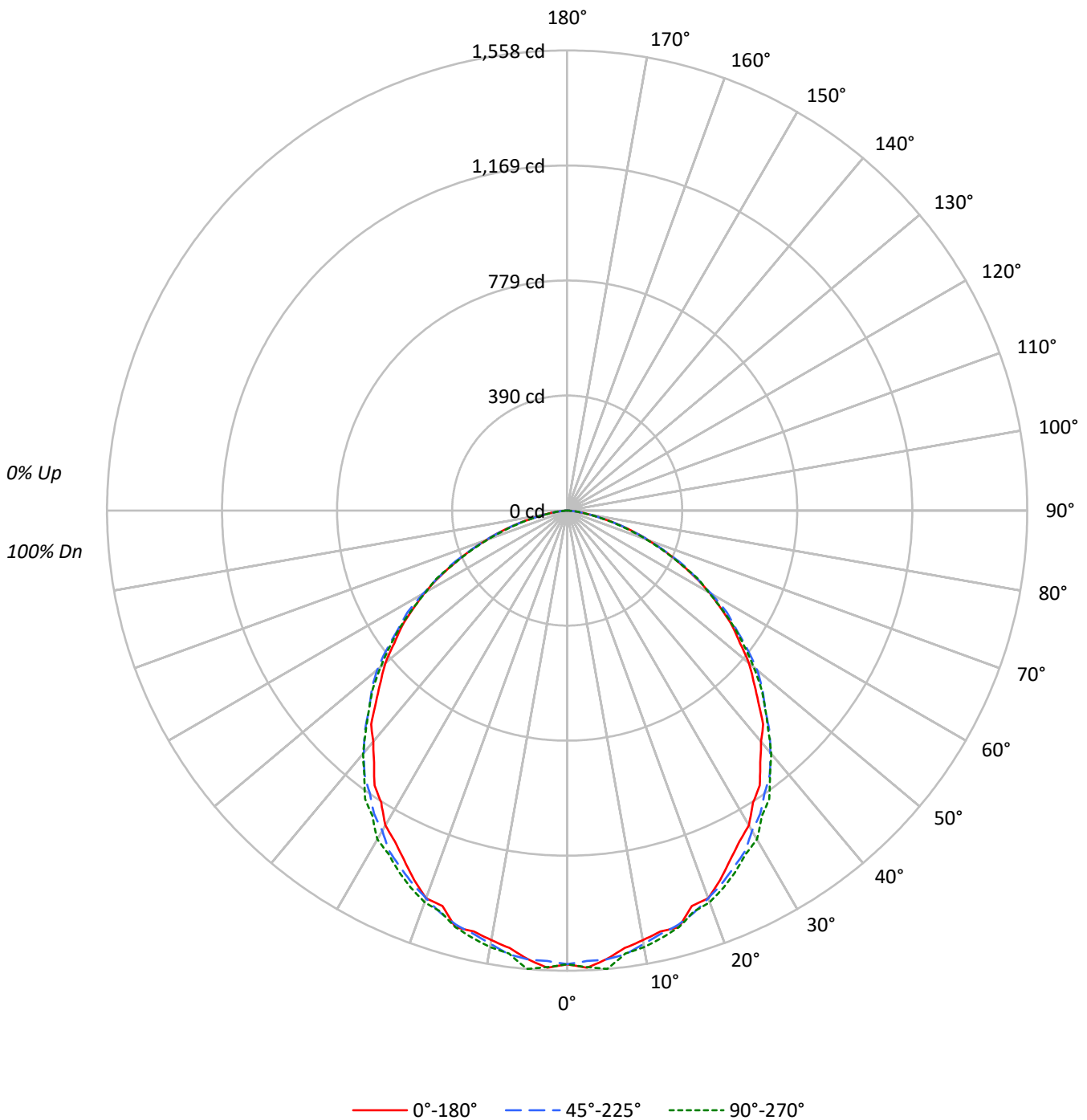
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	4133	4133	4133
5°	4119	4121	4208
10°	4036	4071	4100
15°	4068	4046	4069
20°	3999	3999	4042
25°	3876	3961	4005
30°	3823	3890	3994
35°	3733	3831	3916
40°	3588	3760	3777
45°	3479	3603	3608
50°	3365	3517	3450
55°	3206	3269	3245
60°	2998	3028	2974
65°	2673	2741	2654
70°	2293	2301	2238
75°	1816	1812	1743
80°	1216	1182	1137
85°	661	655	611

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 3696 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	144.5	3.7
10°-20°	409.5	10.6
20°-30°	613.5	15.8
30°-40°	727.1	18.8
40°-50°	728.4	18.8
50°-60°	618.3	16.0
60°-70°	416.9	10.8
70°-80°	183.2	4.7
80°-90°	29.7	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°	1167.4	30.2
0°-40°	1894.5	48.9
0°-60°	3241.2	83.7
0°-90°	3871.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3871.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1536	1536	1536	1536	1536	
5°	1525	1521	1526	1521	1558	144
15°	1460	1443	1452	1460	1460	407
25°	1306	1313	1334	1352	1349	604
35°	1136	1140	1166	1193	1192	706
45°	914	931	947	971	948	707
55°	683	679	697	692	692	608
65°	420	414	430	414	417	418
75°	175	171	174	162	168	187
85°	21	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°	1535.9	1535.9	1535.9	1535.9	1535.9
2.5°	1549.2	1537.5	1526.6	1539.3	1547.0
5°	1525.0	1521.4	1525.6	1521.0	1557.7
7.5°	1493.7	1507.4	1515.3	1510.3	1512.5
10°	1477.0	1472.3	1489.9	1502.2	1500.4
12.5°	1459.2	1466.3	1467.3	1480.6	1481.8
15°	1460.2	1443.3	1452.2	1459.8	1460.4
17.5°	1403.4	1421.7	1427.8	1445.1	1423.7
20°	1396.5	1383.2	1396.5	1414.2	1411.4
22.5°	1353.9	1339.0	1367.5	1383.2	1382.2
25°	1305.5	1312.6	1334.0	1351.5	1348.7
27.5°	1263.0	1271.4	1301.9	1325.9	1310.4
30°	1230.3	1226.2	1251.9	1273.4	1285.3
32.5°	1171.8	1186.9	1217.0	1238.3	1226.9
35°	1136.3	1139.7	1166.1	1193.0	1192.2
37.5°	1074.2	1089.9	1127.0	1134.5	1127.6
40°	1021.3	1037.0	1070.5	1078.6	1075.2
42.5°	982.2	985.0	1013.8	1023.1	1008.2
45°	914.2	931.3	946.7	971.1	948.1
47.5°	856.3	864.2	897.6	904.1	892.0
50°	803.8	806.5	840.0	831.9	824.0
52.5°	737.7	749.4	768.3	766.7	757.3
55°	683.4	678.8	696.7	691.9	691.7
57.5°	618.1	626.1	640.7	633.2	621.1
60°	557.1	557.3	562.6	554.1	552.5
62.5°	489.0	491.4	492.6	482.1	499.1
65°	419.8	414.3	430.5	414.1	416.8
67.5°	356.2	358.9	357.4	347.0	351.0
70°	291.5	295.1	292.5	280.8	284.4
72.5°	232.4	228.1	230.8	216.2	222.9
75°	174.7	171.1	174.3	162.0	167.6
77.5°	119.0	121.8	119.8	113.2	117.0
80°	78.5	76.3	76.3	72.6	73.4
82.5°	45.8	43.6	43.0	41.8	43.6
85°	21.4	20.8	21.2	20.6	19.8
87.5°	7.7	7.9	7.9	7.5	7.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)