

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: P590351

Luminaire Tested: FSR-24-2-LD4-2STD-35-UNV-93-86-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590351
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-93-86-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3789.0 lumens
Efficiency: N/A
Efficacy: 113.8 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

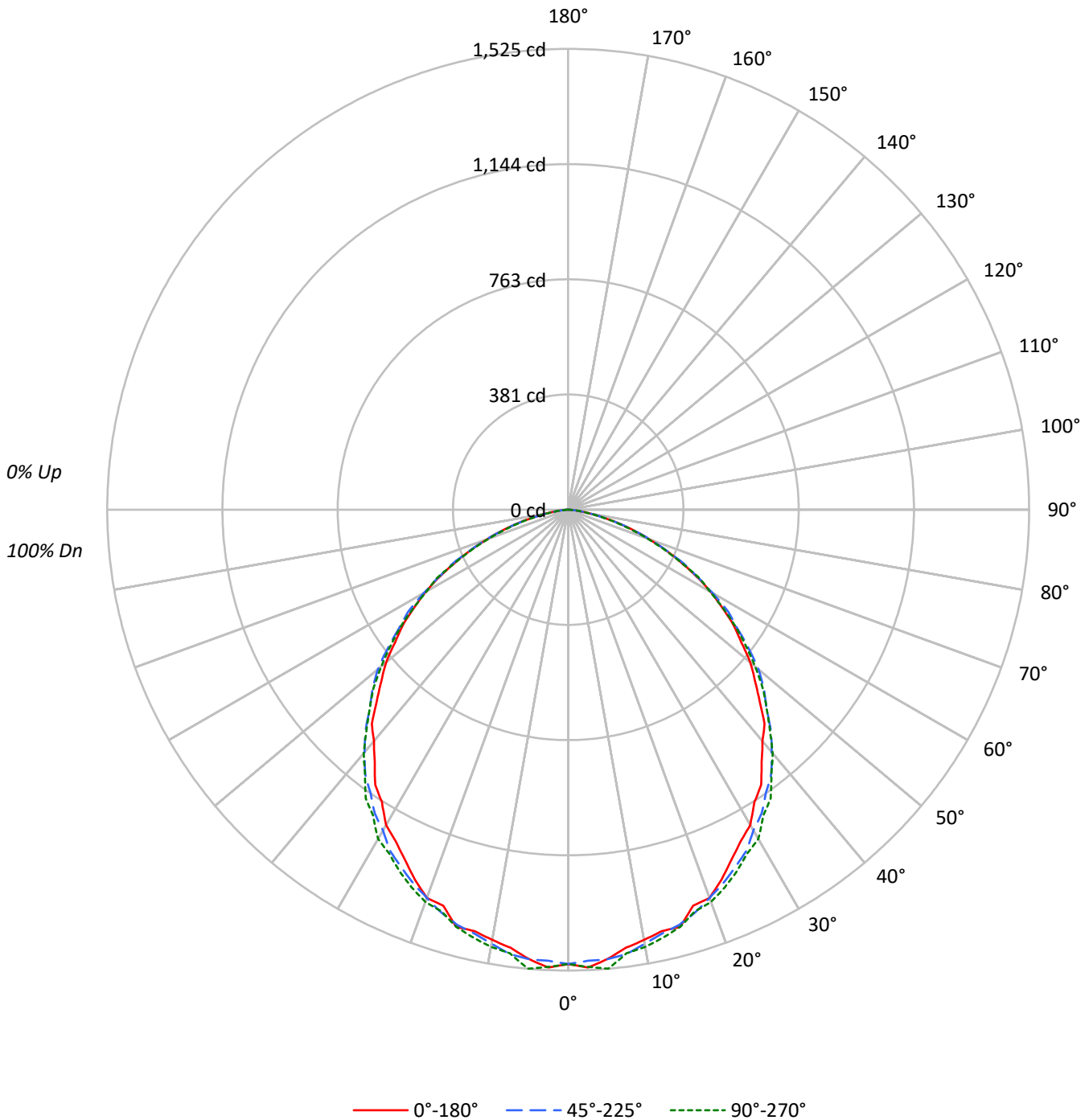
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	4046	4046	4046
5°	4032	4034	4119
10°	3950	3985	4013
15°	3982	3960	3982
20°	3914	3914	3956
25°	3794	3877	3920
30°	3742	3808	3909
35°	3654	3750	3834
40°	3512	3681	3697
45°	3405	3527	3532
50°	3293	3442	3376
55°	3138	3199	3177
60°	2935	2964	2911
65°	2616	2683	2598
70°	2245	2253	2190
75°	1778	1774	1705
80°	1192	1158	1113
85°	648	642	599

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 3618 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	141.4	3.7
10°-20°	400.8	10.6
20°-30°	600.5	15.8
30°-40°	711.7	18.8
40°-50°	713.0	18.8
50°-60°	605.2	16.0
60°-70°	408.0	10.8
70°-80°	179.3	4.7
80°-90°	29.1	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°	1142.7	30.2
0°-40°	1854.3	48.9
0°-60°	3172.5	83.7
0°-90°	3789.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3789.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1503	1503	1503	1503	1503	
5°	1493	1489	1493	1489	1525	141
15°	1429	1413	1422	1429	1429	398
25°	1278	1285	1306	1323	1320	591
35°	1112	1116	1141	1168	1167	691
45°	895	912	927	951	928	692
55°	669	664	682	677	677	595
65°	411	406	421	405	408	409
75°	171	168	171	159	164	183
85°	21	20	21	20	19	30
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1503.4	1503.4	1503.4	1503.4	1503.4
2.5°	1516.4	1504.9	1494.3	1506.7	1514.2
5°	1492.7	1489.2	1493.3	1488.8	1524.7
7.5°	1462.0	1475.4	1483.2	1478.3	1480.5
10°	1445.7	1441.1	1458.3	1470.4	1468.6
12.5°	1428.3	1435.2	1436.2	1449.2	1450.4
15°	1429.2	1412.7	1421.5	1428.8	1429.4
17.5°	1373.7	1391.6	1397.6	1414.5	1393.5
20°	1366.9	1353.9	1366.9	1384.2	1381.5
22.5°	1325.2	1310.6	1338.6	1353.9	1352.9
25°	1277.8	1284.8	1305.8	1322.9	1320.1
27.5°	1236.3	1244.4	1274.3	1297.8	1282.7
30°	1204.3	1200.2	1225.4	1246.4	1258.0
32.5°	1147.0	1161.7	1191.3	1212.0	1201.0
35°	1112.2	1115.5	1141.4	1167.8	1167.0
37.5°	1051.5	1066.8	1103.1	1110.5	1103.7
40°	999.7	1015.0	1047.8	1055.8	1052.5
42.5°	961.4	964.1	992.3	1001.4	986.9
45°	894.8	911.5	926.7	950.6	928.0
47.5°	838.2	845.9	878.5	884.9	873.1
50°	786.7	789.4	822.2	814.3	806.5
52.5°	722.1	733.5	752.0	750.4	741.3
55°	668.9	664.4	681.9	677.2	677.1
57.5°	605.0	612.8	627.2	619.8	608.0
60°	545.3	545.4	550.7	542.3	540.8
62.5°	478.7	481.0	482.2	471.9	488.6
65°	410.9	405.5	421.4	405.3	408.0
67.5°	348.6	351.3	349.8	339.7	343.6
70°	285.3	288.8	286.3	274.9	278.4
72.5°	227.5	223.2	225.9	211.6	218.2
75°	171.0	167.5	170.6	158.6	164.0
77.5°	116.5	119.2	117.2	110.8	114.5
80°	76.9	74.7	74.7	71.0	71.8
82.5°	44.8	42.7	42.1	41.0	42.7
85°	21.0	20.4	20.8	20.2	19.4
87.5°	7.6	7.8	7.8	7.4	7.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)