

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: FAIL-SAFE

Report Number: P312661

Luminaire Tested: **22FCZ2-29HE-UNV-L83050-RDP-CP250-W2A-U-3500K**

Issue Date: 3/3/2020

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.

Test Information

Test Method: LM-79-08
Report Number: P312661
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-24)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 22FCZ2-29HE-UNV-L83050-RDP-CP250-W2A-U-3500K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.250" POLYCARB SHEET
Light Source: (168) 3500K TUNABLE CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment:

<u>Sample No.</u>	<u>Condition</u>	<u>Description</u>
AS-5443-1	Good	WHITE TWIN R-EVOLVE FLOOD
AS-5443-2	Good	REFLECTOR
AS-5443-3	Good	DRIVER
AS-5443-4	Good	UPPER MODULE
AS-5443-5	Good	LENS
AS-5443-6	Good	DRIVER 2
AS-5443-7	Good	TRIM RING

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1595.0 lumens
Efficiency: N/A
Efficacy: 71.2 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

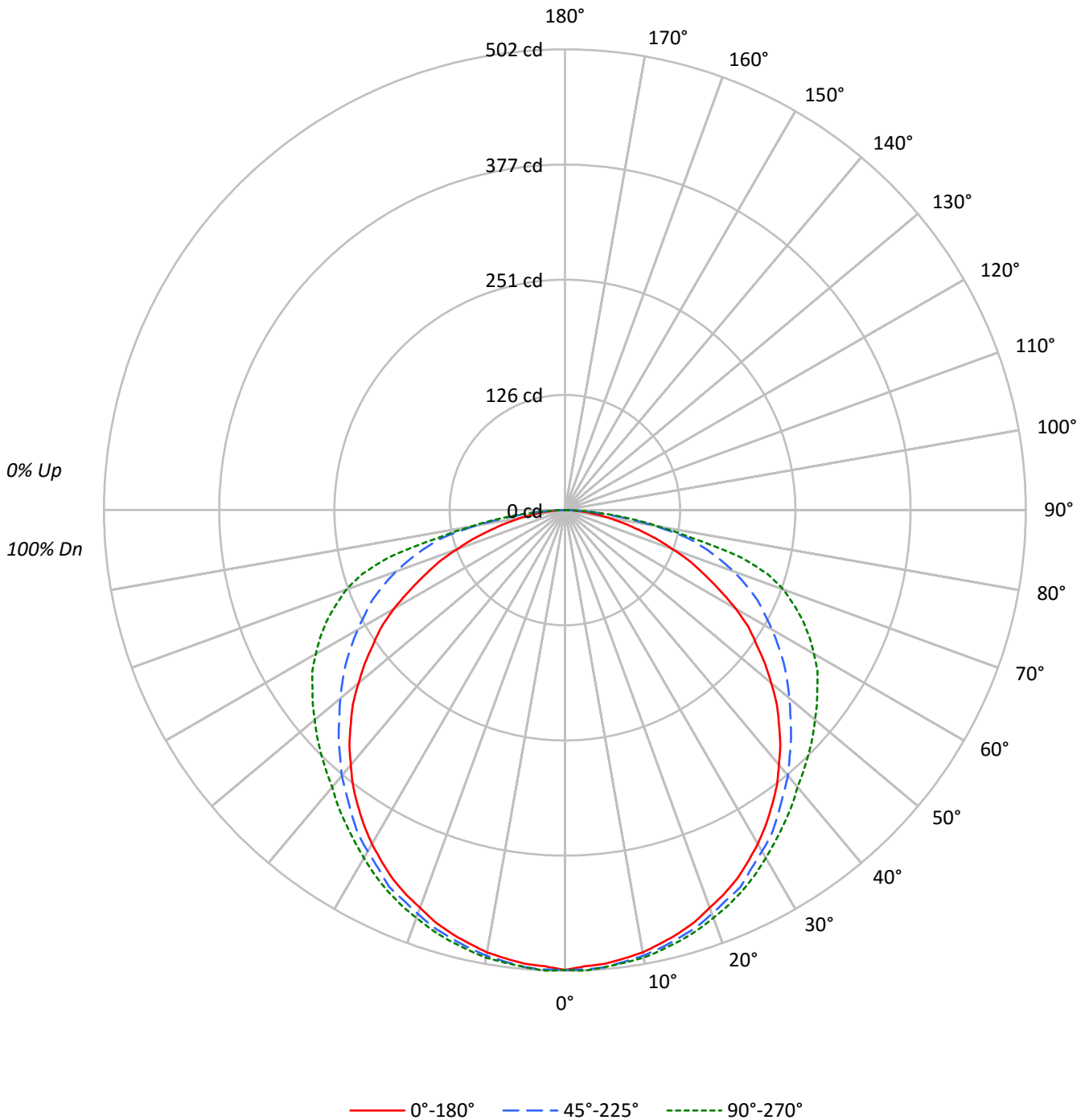
Input Watts (W): 22.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	108	103	98	94	105	100	96	92	96	92	89	92	89	86	88	86	84	82
2	97	88	81	75	95	86	80	74	83	77	72	80	75	71	76	72	69	67
3	88	77	68	61	86	75	67	61	72	65	60	70	64	59	67	62	58	55
4	80	68	59	51	78	66	58	51	64	56	50	61	55	50	59	54	49	47
5	74	60	51	44	72	59	50	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	44	38	51	43	38	50	43	37	48	42	37	35
7	63	49	40	33	61	48	39	33	47	39	33	45	38	33	44	37	33	31
8	59	45	36	30	57	44	35	30	43	35	29	41	34	29	40	34	29	27
9	55	41	32	27	53	40	32	27	39	32	26	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1348	1348	1348
5°	1341	1350	1350
10°	1337	1347	1353
15°	1331	1343	1353
20°	1320	1341	1354
25°	1317	1345	1359
30°	1305	1334	1360
35°	1291	1330	1368
40°	1274	1327	1385
45°	1255	1326	1429
50°	1228	1336	1488
55°	1194	1365	1574
60°	1156	1402	1686
65°	1076	1472	1823
70°	987	1541	1994
75°	866	1623	2062
80°	745	1545	1618
85°	651	1124	1232



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	47.4	3.0
10°-20°	136.1	8.5
20°-30°	207.6	13.0
30°-40°	253.5	15.9
40°-50°	271.0	17.0
50°-60°	261.6	16.4
60°-70°	225.2	14.1
70°-80°	152.4	9.6
80°-90°	40.2	2.5
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°	391.1	24.5
0°-40°	644.6	40.4
0°-60°	1177.2	73.8
0°-90°	1595.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1595.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	501	501	501	501	501	
5°	496	498	500	500	500	47
15°	478	479	482	485	486	135
25°	444	446	453	455	458	204
35°	393	397	405	413	416	246
45°	330	336	348	366	376	255
55°	255	263	291	320	336	228
65°	169	185	231	268	286	168
75°	83	110	156	188	198	89
85°	21	29	36	38	40	24
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	501.0	501.0	501.0	501.0	501.0
2.5°	497.5	498.7	501.0	501.0	502.2
5°	496.3	497.5	499.8	499.8	499.8
7.5°	492.8	494.0	496.3	497.5	497.5
10°	489.3	490.5	492.8	494.0	495.2
12.5°	483.4	484.6	488.1	490.5	490.5
15°	477.6	478.7	482.2	484.6	485.8
17.5°	470.5	472.9	476.4	478.7	479.9
20°	461.1	463.5	468.2	471.7	472.9
22.5°	452.9	455.3	460.0	463.5	465.8
25°	443.5	445.9	452.9	455.3	457.6
27.5°	431.8	434.1	440.0	444.7	448.2
30°	420.1	422.4	429.4	435.3	437.7
32.5°	407.1	410.7	418.9	423.6	427.1
35°	393.1	396.6	404.8	413.0	416.5
37.5°	379.0	382.5	390.7	401.3	406.0
40°	362.6	367.3	377.8	391.9	394.2
42.5°	347.3	353.2	362.6	379.0	384.9
45°	329.7	335.6	348.5	366.1	375.5
47.5°	313.3	319.1	333.2	354.3	366.1
50°	293.3	301.5	319.1	343.8	355.5
52.5°	274.6	281.6	305.1	332.1	346.1
55°	254.6	262.8	291.0	320.3	335.6
57.5°	237.0	244.1	275.7	308.6	326.2
60°	214.7	224.1	260.5	295.7	313.3
62.5°	191.3	205.3	245.2	281.6	300.4
65°	169.0	185.4	231.1	267.5	286.3
67.5°	149.0	166.6	213.5	252.3	269.9
70°	125.5	147.8	195.9	233.5	253.4
72.5°	104.4	129.1	176.0	213.5	231.1
75°	83.3	110.3	156.1	187.7	198.3
77.5°	64.5	90.3	133.8	143.1	144.3
80°	48.1	71.6	99.7	100.9	104.4
82.5°	32.9	50.5	64.5	70.4	71.6
85°	21.1	29.3	36.4	37.5	39.9
87.5°	9.4	10.6	12.9	11.7	11.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)