

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: P312649

Luminaire Tested: **22FCZ2-29HE-UNV-L83050-RDP-CA125-W2A-U-5000K**

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: P312649
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-CA125-W2A-U-5000K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" ACRYLIC SHEET
Light Source: (168) 5000K 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: 1815.0 lumens
Efficiency: N/A
Efficacy: 77.2 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

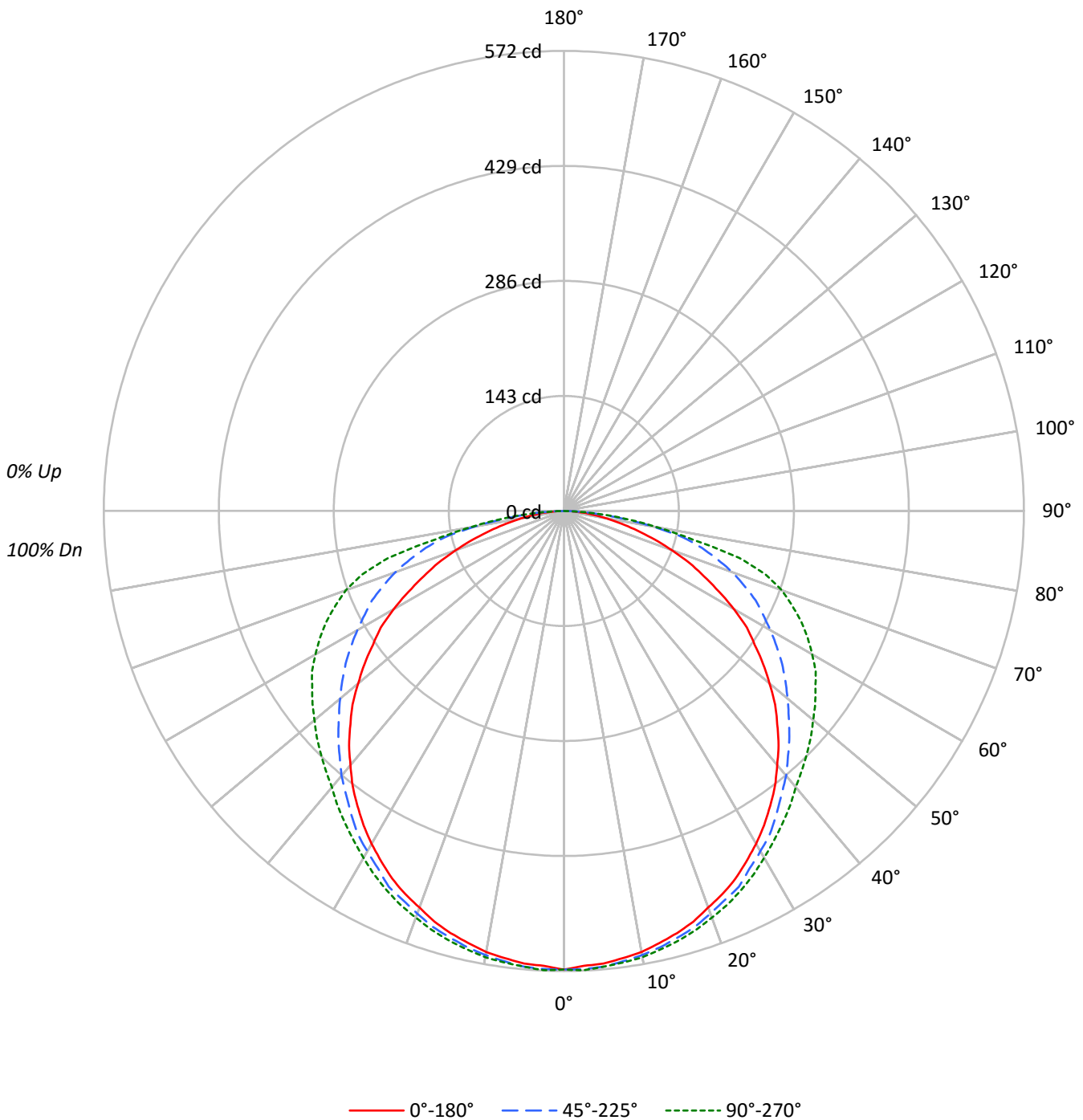
Input Watts (W): 23.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1534	1534	1534
5°	1526	1536	1536
10°	1521	1532	1539
15°	1514	1529	1540
20°	1503	1525	1541
25°	1499	1530	1546
30°	1485	1519	1547
35°	1469	1513	1557
40°	1449	1510	1576
45°	1428	1509	1626
50°	1397	1521	1694
55°	1359	1553	1792
60°	1315	1595	1919
65°	1224	1675	2074
70°	1124	1755	2269
75°	986	1847	2346
80°	848	1759	1841
85°	741	1278	1402



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	53.9	3.0
10°-20°	154.8	8.5
20°-30°	236.2	13.0
30°-40°	288.5	15.9
40°-50°	308.4	17.0
50°-60°	297.7	16.4
60°-70°	256.3	14.1
70°-80°	173.4	9.6
80°-90°	45.7	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°	445.0	24.5
0°-40°	733.5	40.4
0°-60°	1339.6	73.8
0°-90°	1815.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1815.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	570	570	570	570	570	
5°	565	566	569	569	569	54
15°	543	545	549	551	553	153
25°	505	507	515	518	521	232
35°	447	451	461	470	474	280
45°	375	382	396	417	427	290
55°	290	299	331	364	382	260
65°	192	211	263	304	326	191
75°	95	126	178	214	226	102
85°	24	33	41	43	45	27
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	570.1	570.1	570.1	570.1	570.1
2.5°	566.1	567.5	570.1	570.1	571.5
5°	564.8	566.1	568.8	568.8	568.8
7.5°	560.8	562.1	564.8	566.1	566.1
10°	556.8	558.1	560.8	562.1	563.4
12.5°	550.1	551.4	555.4	558.1	558.1
15°	543.4	544.8	548.8	551.4	552.8
17.5°	535.4	538.1	542.1	544.8	546.1
20°	524.7	527.4	532.7	536.7	538.1
22.5°	515.4	518.1	523.4	527.4	530.1
25°	504.7	507.4	515.4	518.1	520.7
27.5°	491.3	494.0	500.7	506.0	510.0
30°	478.0	480.7	488.7	495.4	498.0
32.5°	463.3	467.3	476.7	482.0	486.0
35°	447.3	451.3	460.6	470.0	474.0
37.5°	431.3	435.3	444.6	456.6	462.0
40°	412.6	417.9	429.9	446.0	448.6
42.5°	395.2	401.9	412.6	431.3	437.9
45°	375.2	381.9	396.5	416.6	427.3
47.5°	356.5	363.2	379.2	403.2	416.6
50°	333.8	343.1	363.2	391.2	404.6
52.5°	312.4	320.4	347.1	377.9	393.9
55°	289.7	299.1	331.1	364.5	381.9
57.5°	269.7	277.7	313.8	351.2	371.2
60°	244.3	255.0	296.4	336.5	356.5
62.5°	217.6	233.7	279.1	320.4	341.8
65°	192.3	211.0	263.0	304.4	325.8
67.5°	169.6	189.6	243.0	287.1	307.1
70°	142.9	168.2	223.0	265.7	288.4
72.5°	118.8	146.9	200.3	243.0	263.0
75°	94.8	125.5	177.6	213.6	225.6
77.5°	73.4	102.8	152.2	162.9	164.2
80°	54.7	81.4	113.5	114.8	118.8
82.5°	37.4	57.4	73.4	80.1	81.4
85°	24.0	33.4	41.4	42.7	45.4
87.5°	10.7	12.0	14.7	13.4	13.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)