

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: P311179

Luminaire Tested: **24FCZ2-30HE-UNV-L82765-S-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: P311179
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-30HE-UNV-L82765-S-CA125-W2A-U-5000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" ACRYLIC SHEET
Light Source: (336) 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: 3026.0 lumens
Efficiency: N/A
Efficacy: 140.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

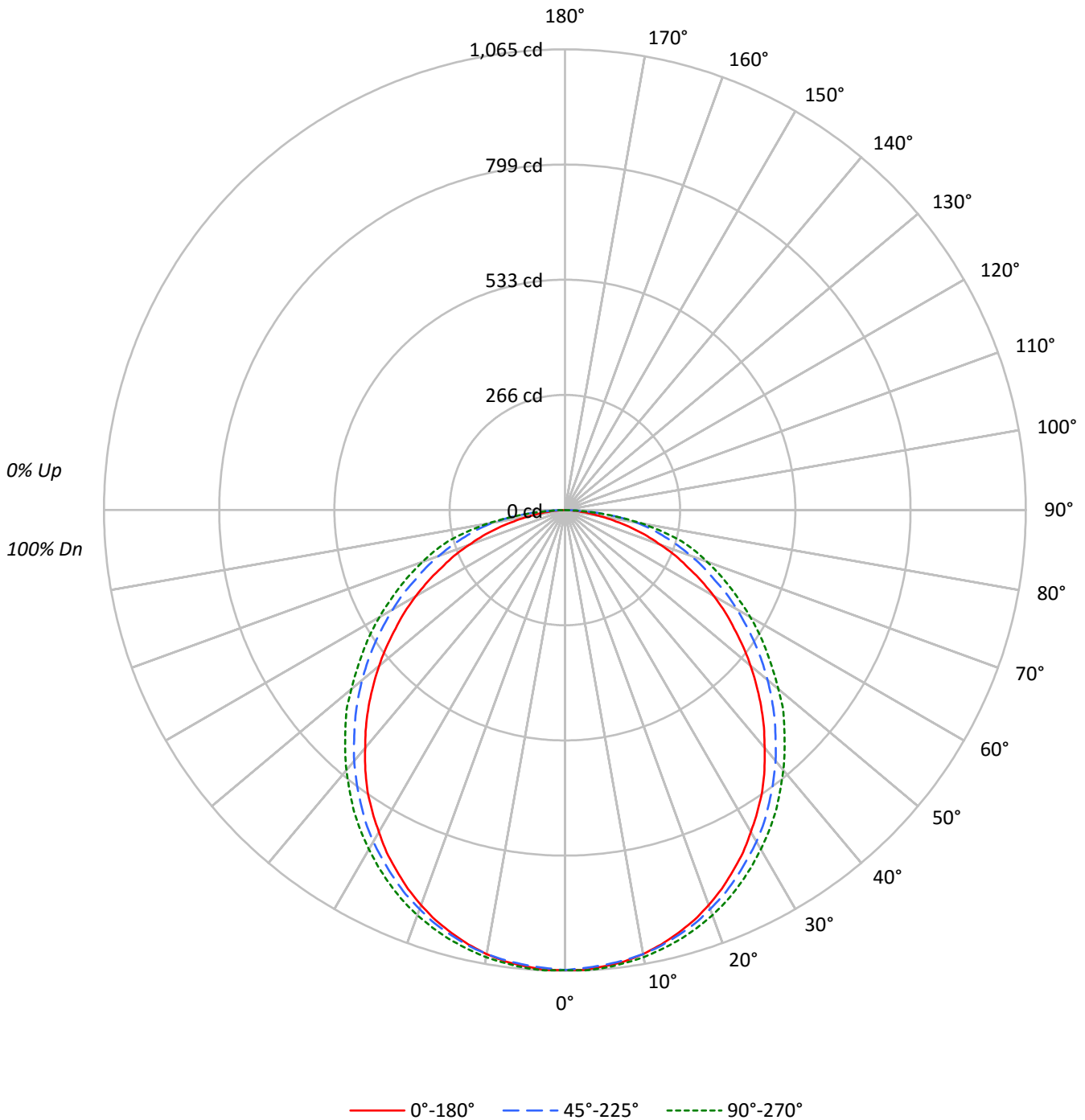
Input Watts (W): 21.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1430	1430	1430
5°	1429	1425	1435
10°	1423	1423	1434
15°	1410	1416	1431
20°	1391	1405	1427
25°	1366	1391	1418
30°	1335	1375	1407
35°	1306	1353	1396
40°	1261	1330	1379
45°	1220	1304	1364
50°	1173	1280	1348
55°	1121	1256	1335
60°	1068	1236	1332
65°	1001	1215	1340
70°	926	1221	1376
75°	830	1244	1454
80°	670	1318	1423
85°	505	1158	1127



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	100.6	3.3
10°-20°	287.6	9.5
20°-30°	432.3	14.3
30°-40°	514.9	17.0
40°-50°	527.0	17.4
50°-60°	474.4	15.7
60°-70°	372.6	12.3
70°-80°	241.8	8.0
80°-90°	74.8	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°	820.5	27.1
0°-40°	1335.4	44.1
0°-60°	2336.8	77.2
0°-90°	3026.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3026.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1063	1063	1063	1063	1063	
5°	1058	1060	1055	1061	1062	101
15°	1012	1015	1017	1026	1028	285
25°	920	928	937	952	955	424
35°	795	804	824	844	850	496
45°	641	656	685	711	717	494
55°	478	499	535	563	569	428
65°	314	338	382	413	421	313
75°	160	190	239	272	280	169
85°	33	61	75	73	73	39
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1063.1	1063.1	1063.1	1063.1	1063.1
2.5°	1064.0	1064.0	1059.2	1064.0	1065.0
5°	1058.2	1060.2	1055.4	1061.1	1062.1
7.5°	1052.5	1052.5	1049.6	1055.4	1056.3
10°	1041.9	1042.9	1041.9	1048.6	1049.6
12.5°	1028.5	1030.4	1031.3	1038.1	1039.0
15°	1012.1	1015.0	1016.9	1025.6	1027.5
17.5°	993.8	996.7	1001.5	1011.2	1013.1
20°	971.7	975.6	981.4	993.8	996.7
22.5°	947.7	951.6	961.2	972.7	977.5
25°	919.8	927.5	937.1	952.5	955.4
27.5°	892.0	898.7	911.2	927.5	931.4
30°	859.3	869.9	885.2	901.6	905.4
32.5°	827.6	838.1	856.4	873.7	878.5
35°	794.9	804.5	823.7	843.9	849.7
37.5°	757.4	769.9	791.0	811.2	817.0
40°	718.0	733.4	757.4	778.5	785.3
42.5°	680.5	696.8	720.9	743.9	751.6
45°	641.1	656.5	685.3	711.3	717.0
47.5°	600.7	618.0	648.8	674.7	684.4
50°	560.4	578.6	611.3	638.2	644.0
52.5°	520.0	539.2	573.8	602.7	605.5
55°	477.7	498.8	535.4	563.2	569.0
57.5°	439.3	457.5	496.9	525.8	532.5
60°	397.0	417.1	459.4	486.4	495.0
62.5°	356.6	377.7	422.0	448.9	456.6
65°	314.3	338.3	381.6	413.3	421.0
67.5°	277.8	300.8	347.0	377.7	385.4
70°	235.5	261.4	310.5	342.2	349.9
72.5°	199.0	225.9	274.9	305.7	317.2
75°	159.6	190.3	239.3	272.0	279.7
77.5°	121.1	156.7	206.7	231.6	231.6
80°	86.5	124.0	170.1	181.7	183.6
82.5°	56.7	93.2	125.9	125.0	125.0
85°	32.7	60.6	75.0	73.0	73.0
87.5°	12.5	25.0	26.9	26.9	26.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)