

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: P314198

Luminaire Tested: **24FCZ2-30-UNV-L83050-S-CA125-W2A-U-4500K**

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: P314198
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: 24FCZ2-30-UNV-L83050-S-CA125-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" ACRYLIC SHEET
Light Source: (168) 4500K 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: 3077.0 lumens
Efficiency: N/A
Efficacy: 125.6 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

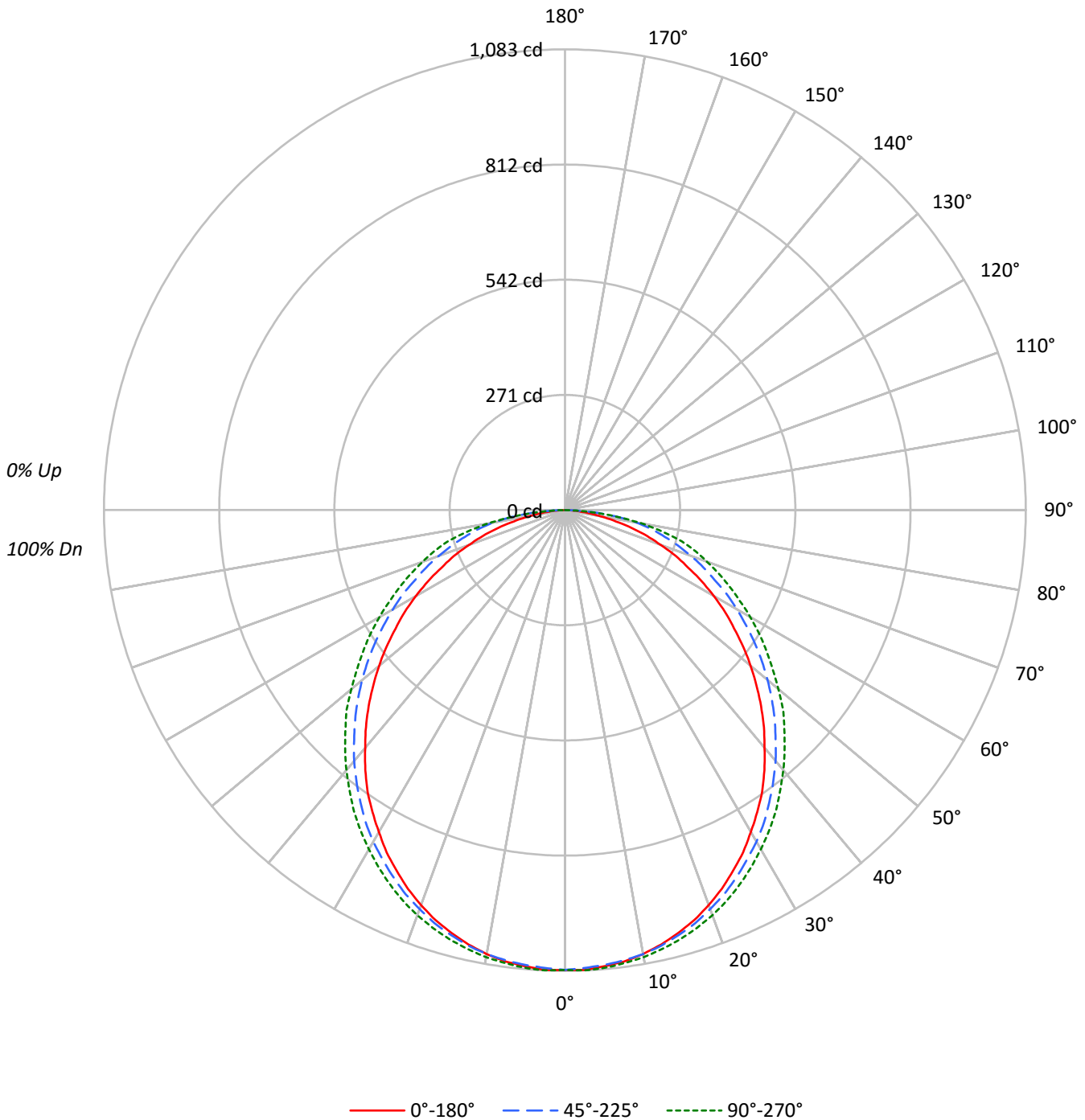
Input Watts (W): 24.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1454	1454	1454
5°	1453	1449	1459
10°	1448	1448	1458
15°	1434	1440	1455
20°	1415	1429	1451
25°	1389	1415	1442
30°	1358	1399	1430
35°	1328	1376	1419
40°	1282	1353	1402
45°	1240	1326	1387
50°	1193	1301	1371
55°	1140	1277	1357
60°	1086	1257	1354
65°	1018	1235	1363
70°	942	1242	1400
75°	843	1265	1478
80°	682	1340	1447
85°	513	1176	1147



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	102.3	3.3
10°-20°	292.4	9.5
20°-30°	439.6	14.3
30°-40°	523.6	17.0
40°-50°	535.9	17.4
50°-60°	482.4	15.7
60°-70°	378.9	12.3
70°-80°	245.9	8.0
80°-90°	76.1	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°	834.3	27.1
0°-40°	1357.9	44.1
0°-60°	2376.2	77.2
0°-90°	3077.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3077.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1081	1081	1081	1081	1081	
5°	1076	1078	1073	1079	1080	102
15°	1029	1032	1034	1043	1045	290
25°	935	943	953	969	972	431
35°	808	818	838	858	864	504
45°	652	668	697	723	729	503
55°	486	507	544	573	579	436
65°	320	344	388	420	428	318
75°	162	194	243	277	284	172
85°	33	62	76	74	74	40
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1081.0	1081.0	1081.0	1081.0	1081.0
2.5°	1081.9	1081.9	1077.1	1081.9	1082.9
5°	1076.1	1078.0	1073.2	1079.0	1080.0
7.5°	1070.2	1070.2	1067.3	1073.2	1074.1
10°	1059.5	1060.4	1059.5	1066.3	1067.3
12.5°	1045.8	1047.7	1048.7	1055.6	1056.5
15°	1029.2	1032.1	1034.1	1042.9	1044.8
17.5°	1010.6	1013.5	1018.4	1028.2	1030.1
20°	988.1	992.0	997.9	1010.6	1013.5
22.5°	963.7	967.6	977.4	989.1	994.0
25°	935.3	943.2	952.9	968.6	971.5
27.5°	907.0	913.8	926.5	943.2	947.1
30°	873.8	884.5	900.2	916.8	920.7
32.5°	841.5	852.3	870.8	888.4	893.3
35°	808.3	818.1	837.6	858.1	864.0
37.5°	770.2	782.9	804.4	824.9	830.8
40°	730.1	745.7	770.2	791.7	798.5
42.5°	692.0	708.6	733.0	756.5	764.3
45°	651.9	667.5	696.9	723.3	729.1
47.5°	610.9	628.4	659.7	686.1	695.9
50°	569.8	588.4	621.6	649.0	654.8
52.5°	528.8	548.3	583.5	612.8	615.7
55°	485.8	507.3	544.4	572.7	578.6
57.5°	446.7	465.2	505.3	534.6	541.5
60°	403.7	424.2	467.2	494.5	503.3
62.5°	362.6	384.1	429.1	456.4	464.3
65°	319.6	344.0	388.0	420.3	428.1
67.5°	282.5	305.9	352.8	384.1	391.9
70°	239.5	265.8	315.7	347.9	355.8
72.5°	202.3	229.7	279.5	310.8	322.5
75°	162.2	193.5	243.4	276.6	284.4
77.5°	123.1	159.3	210.1	235.5	235.5
80°	88.0	126.1	173.0	184.7	186.7
82.5°	57.7	94.8	128.0	127.1	127.1
85°	33.2	61.6	76.2	74.3	74.3
87.5°	12.7	25.4	27.4	27.4	26.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)