

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: P313648

Luminaire Tested: **24FCZ2-50-UNV-L83050-RDP-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: P313648
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-50-UNV-L83050-RDP-CA125-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 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: 3249.0 lumens
Efficiency: N/A
Efficacy: 72.5 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

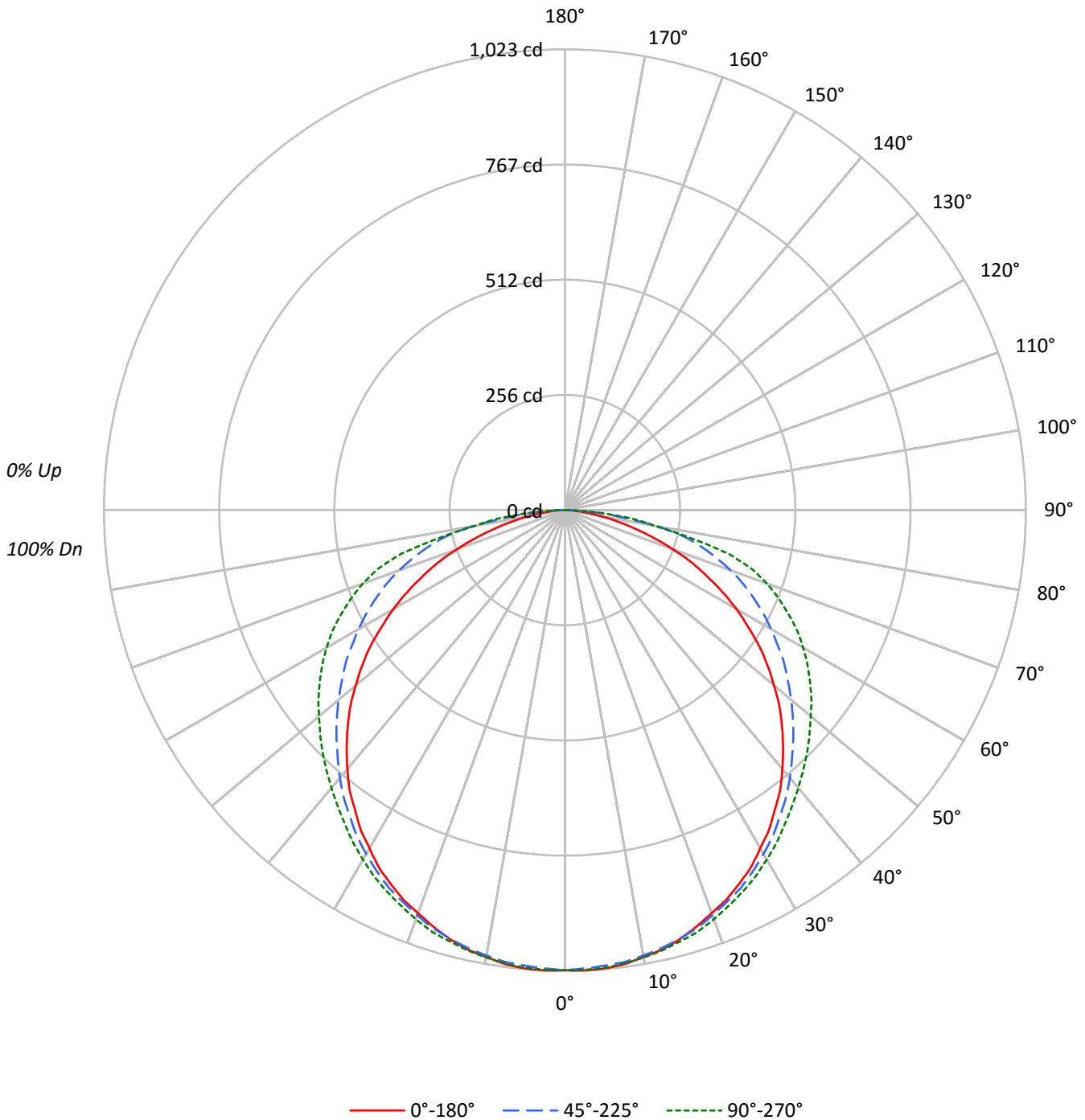
Input Watts (W): 44.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	93	89	92	89	87	88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67
3	88	77	68	62	86	76	67	61	72	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27	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°	1375	1375	1375
5°	1380	1371	1378
10°	1376	1372	1378
15°	1374	1372	1381
20°	1364	1371	1384
25°	1359	1373	1388
30°	1347	1370	1392
35°	1334	1366	1398
40°	1319	1364	1415
45°	1297	1365	1447
50°	1268	1373	1491
55°	1236	1395	1558
60°	1184	1422	1644
65°	1108	1472	1744
70°	1008	1541	1876
75°	855	1625	1960
80°	674	1636	1586
85°	497	1244	1392



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	96.9	3.0
10°-20°	278.9	8.6
20°-30°	426.5	13.1
30°-40°	521.5	16.0
40°-50°	555.8	17.1
50°-60°	531.4	16.4
60°-70°	450.2	13.9
70°-80°	302.5	9.3
80°-90°	85.3	2.6
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°	802.4	24.7
0°-40°	1323.9	40.7
0°-60°	2411.0	74.2
0°-90°	3249.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3249.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1022	1022	1022	1022	1022	
5°	1022	1020	1015	1020	1020	97
15°	986	986	985	993	991	278
25°	915	919	925	933	935	422
35°	812	819	832	848	851	509
45°	682	693	717	748	761	526
55°	527	546	595	641	664	469
65°	348	384	462	524	548	346
75°	164	224	313	366	377	176
85°	32	66	81	87	90	40
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1021.7	1021.7	1021.7	1021.7	1021.7
2.5°	1023.3	1023.3	1018.5	1021.7	1021.7
5°	1021.7	1020.1	1015.3	1020.1	1020.1
7.5°	1016.9	1015.3	1012.0	1016.9	1015.3
10°	1007.2	1007.2	1004.0	1008.8	1008.8
12.5°	999.2	997.5	995.9	1002.4	1000.8
15°	986.3	986.3	984.7	992.7	991.1
17.5°	970.1	971.8	973.4	979.8	981.4
20°	952.4	955.6	957.3	966.9	966.9
22.5°	936.3	937.9	941.1	950.8	950.8
25°	915.4	918.6	925.0	933.1	934.7
27.5°	894.4	896.0	904.1	915.4	917.0
30°	867.0	871.8	881.5	894.4	896.0
32.5°	842.8	847.7	859.0	871.8	875.1
35°	812.2	818.7	831.6	847.7	850.9
37.5°	784.8	789.7	805.8	823.5	828.3
40°	751.0	760.6	776.8	797.7	805.8
42.5°	717.1	726.8	746.1	773.5	783.2
45°	681.7	693.0	717.1	747.8	760.6
47.5°	646.2	659.1	686.5	722.0	736.5
50°	605.9	622.1	655.9	696.2	712.3
52.5°	567.3	586.6	623.7	668.8	689.7
55°	527.0	546.3	594.7	641.4	664.0
57.5°	481.9	507.6	560.8	614.0	638.2
60°	440.0	464.1	528.6	586.6	610.8
62.5°	394.8	427.1	496.4	557.6	581.8
65°	348.1	383.5	462.5	523.8	547.9
67.5°	306.2	344.9	428.7	489.9	514.1
70°	256.2	304.6	391.6	452.8	477.0
72.5°	209.5	262.7	352.9	412.6	435.1
75°	164.4	224.0	312.6	365.8	377.1
77.5°	122.5	185.3	270.7	293.3	285.2
80°	87.0	148.3	211.1	199.8	204.7
82.5°	56.4	112.8	130.5	148.3	153.1
85°	32.2	66.1	80.6	87.0	90.2
87.5°	14.5	24.2	32.2	32.2	30.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)