

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: P313421

Luminaire Tested: **24FCZ2-30HE-UNV-L83050-RDP-CA125-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: P313421
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: 24FCZ2-30HE-UNV-L83050-RDP-CA125-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" ACRYLIC SHEET
Light Source: (336) 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: 1881.0 lumens
Efficiency: N/A
Efficacy: 89.1 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

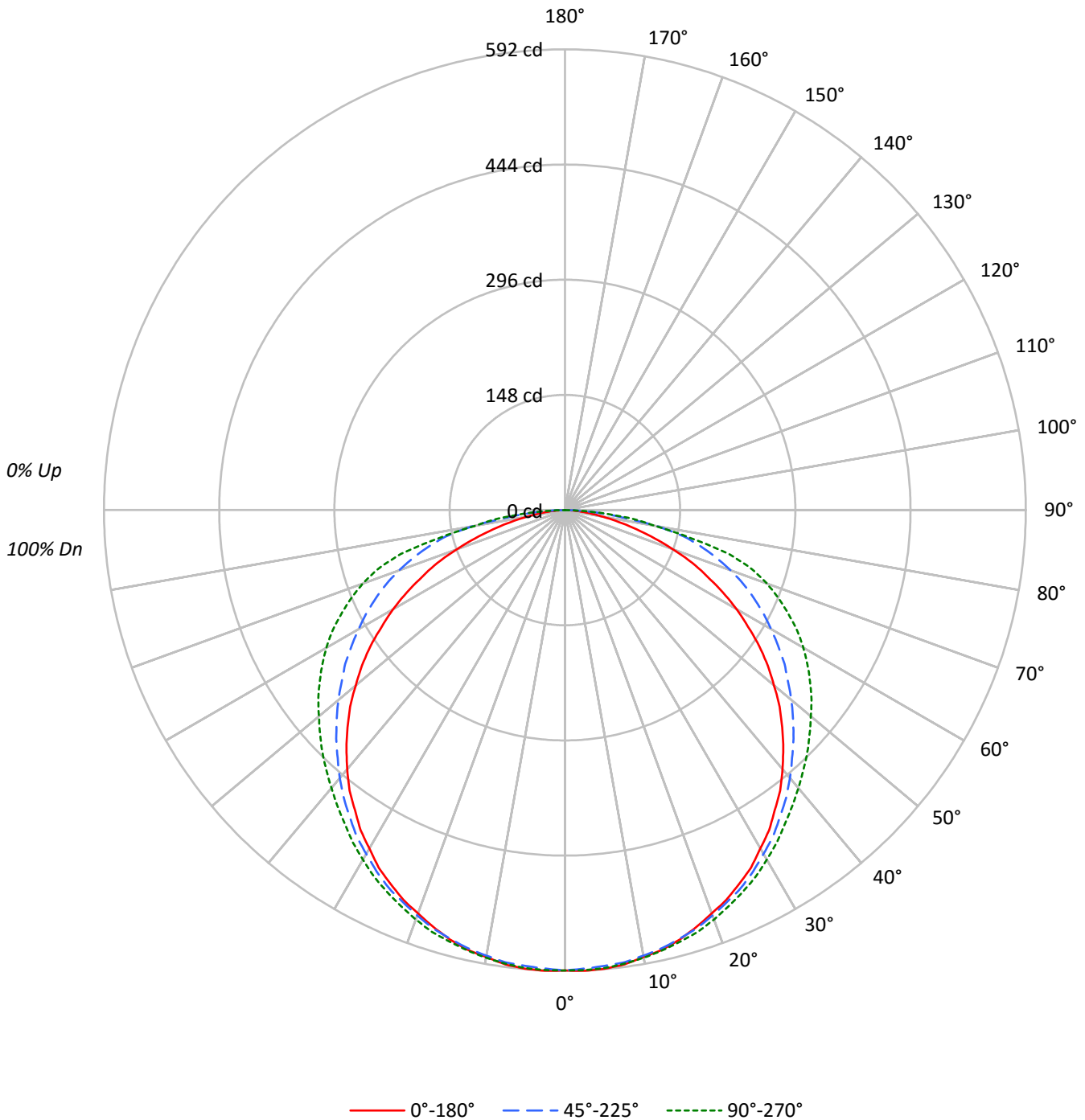
Input Watts (W): 21.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	796	796	796
5°	799	794	798
10°	797	794	798
15°	795	794	799
20°	790	794	802
25°	787	795	803
30°	780	793	806
35°	772	791	809
40°	764	790	819
45°	751	790	838
50°	734	795	863
55°	716	808	902
60°	685	823	952
65°	642	853	1010
70°	583	892	1087
75°	495	941	1135
80°	391	947	918
85°	289	719	806



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	56.1	3.0
10°-20°	161.5	8.6
20°-30°	246.9	13.1
30°-40°	301.9	16.0
40°-50°	321.8	17.1
50°-60°	307.6	16.4
60°-70°	260.6	13.9
70°-80°	175.1	9.3
80°-90°	49.4	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°	464.5	24.7
0°-40°	766.4	40.7
0°-60°	1395.8	74.2
0°-90°	1881.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1881.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	592	592	592	592	592	
5°	592	591	588	591	591	56
15°	571	571	570	575	574	161
25°	530	532	536	540	541	244
35°	470	474	481	491	493	295
45°	395	401	415	433	440	304
55°	305	316	344	371	384	272
65°	202	222	268	303	317	200
75°	95	130	181	212	218	102
85°	19	38	47	50	52	23
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	591.5	591.5	591.5	591.5	591.5
2.5°	592.5	592.5	589.7	591.5	591.5
5°	591.5	590.6	587.8	590.6	590.6
7.5°	588.7	587.8	585.9	588.7	587.8
10°	583.1	583.1	581.3	584.1	584.1
12.5°	578.5	577.5	576.6	580.3	579.4
15°	571.0	571.0	570.1	574.7	573.8
17.5°	561.7	562.6	563.5	567.3	568.2
20°	551.4	553.3	554.2	559.8	559.8
22.5°	542.1	543.0	544.9	550.5	550.5
25°	529.9	531.8	535.5	540.2	541.1
27.5°	517.8	518.7	523.4	529.9	530.9
30°	502.0	504.8	510.3	517.8	518.7
32.5°	488.0	490.8	497.3	504.8	506.6
35°	470.2	474.0	481.4	490.8	492.6
37.5°	454.4	457.2	466.5	476.8	479.6
40°	434.8	440.4	449.7	461.8	466.5
42.5°	415.2	420.8	432.0	447.8	453.4
45°	394.7	401.2	415.2	432.9	440.4
47.5°	374.1	381.6	397.5	418.0	426.4
50°	350.8	360.1	379.7	403.1	412.4
52.5°	328.4	339.6	361.1	387.2	399.3
55°	305.1	316.3	344.3	371.3	384.4
57.5°	279.0	293.9	324.7	355.5	369.5
60°	254.7	268.7	306.0	339.6	353.6
62.5°	228.6	247.2	287.4	322.8	336.8
65°	201.5	222.1	267.8	303.2	317.2
67.5°	177.3	199.7	248.2	283.6	297.6
70°	148.3	176.3	226.7	262.2	276.2
72.5°	121.3	152.1	204.3	238.8	251.9
75°	95.2	129.7	181.0	211.8	218.3
77.5°	70.9	107.3	156.7	169.8	165.1
80°	50.4	85.8	122.2	115.7	118.5
82.5°	32.7	65.3	75.6	85.8	88.6
85°	18.7	38.3	46.6	50.4	52.2
87.5°	8.4	14.0	18.7	18.7	17.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)