

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: P309827

Luminaire Tested: **24FCZ2-30HE-UNV-L82765-RDP-CA125-W2A-U-4000K**

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: P309827
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-L82765-RDP-CA125-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" ACRYLIC SHEET
Light Source: (336) 4000K 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: 1877.0 lumens
Efficiency: N/A
Efficacy: 88.1 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

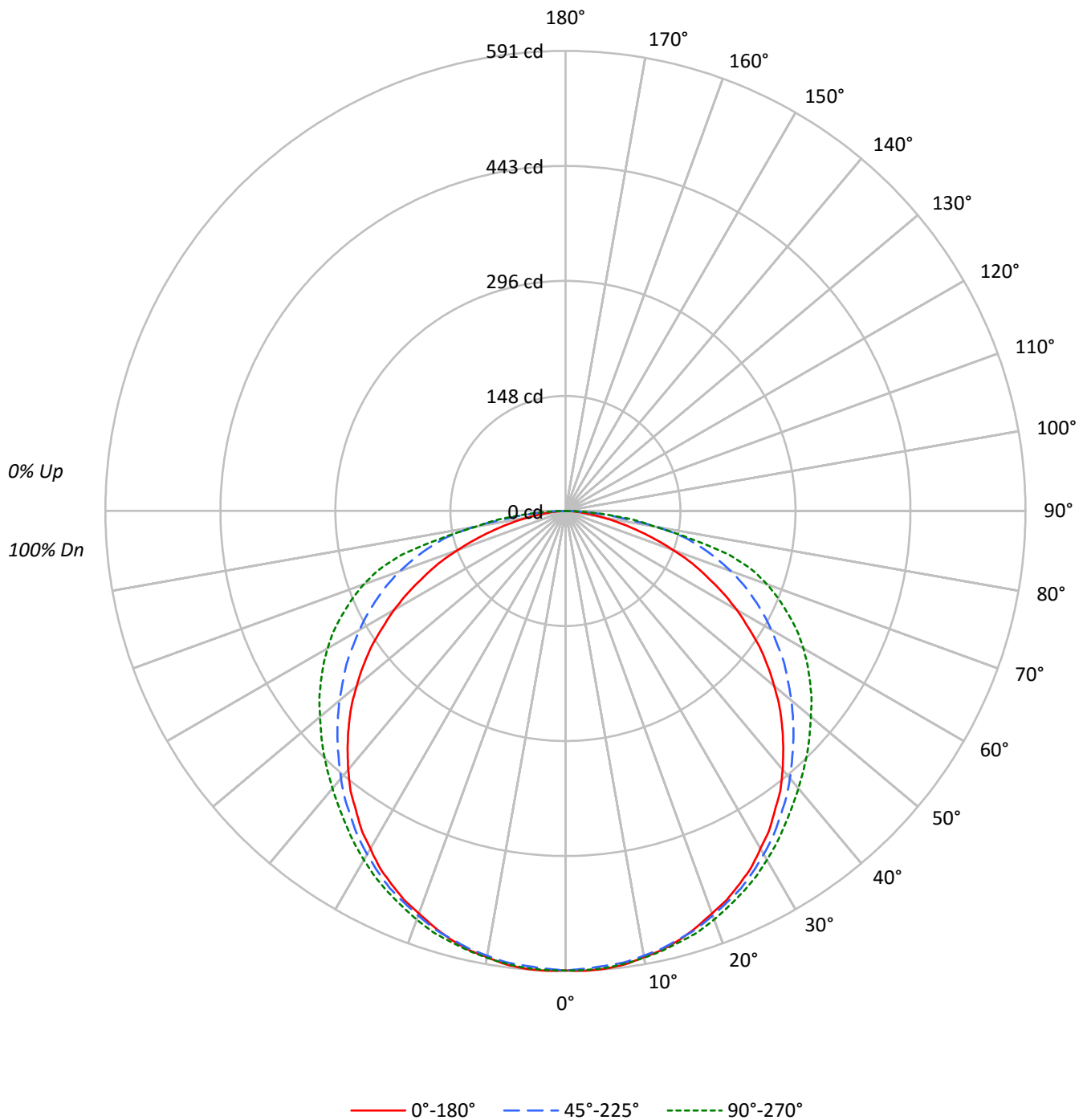
Input Watts (W): 21.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				0
RW	70	50	30	10	70	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		100
1	108	103	98	94	105	100	96	92	96	93	89		92	89	87		82
2	97	89	81	75	95	87	80	74	83	77	72		80	75	71		67
3	88	77	68	62	86	76	67	61	72	66	60		70	64	59		56
4	81	68	59	52	78	67	58	51	64	57	51		62	55	50		47
5	74	60	51	44	72	59	51	44	57	49	43		55	48	43		40
6	68	54	45	38	66	53	45	38	51	44	38		50	43	37		35
7	63	49	40	34	61	48	40	34	47	39	33		45	38	33		31
8	59	45	36	30	57	44	36	30	43	35	30		41	34	29		27
9	55	41	33	27	53	40	32	27	39	32	27		38	31	26		24
10	51	38	30	24	50	37	29	24	36	29	24		35	29	24		22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	794	794	794
5°	797	792	796
10°	795	792	796
15°	794	792	798
20°	788	792	800
25°	785	793	802
30°	778	791	804
35°	771	789	807
40°	762	788	818
45°	749	788	836
50°	733	793	861
55°	714	806	900
60°	684	822	950
65°	640	851	1008
70°	582	890	1084
75°	494	939	1133
80°	390	945	916
85°	287	719	804



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	56.0	3.0
10°-20°	161.1	8.6
20°-30°	246.4	13.1
30°-40°	301.2	16.0
40°-50°	321.1	17.1
50°-60°	307.0	16.4
60°-70°	260.1	13.9
70°-80°	174.8	9.3
80°-90°	49.3	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°	463.6	24.7
0°-40°	764.8	40.7
0°-60°	1392.9	74.2
0°-90°	1877.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1877.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	590	590	590	590	590	
5°	590	589	586	589	589	56
15°	570	570	569	574	573	161
25°	529	531	534	539	540	244
35°	469	473	480	490	492	294
45°	394	400	414	432	439	304
55°	304	316	344	370	384	271
65°	201	222	267	303	316	200
75°	95	129	181	211	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°	590.3	590.3	590.3	590.3	590.3
2.5°	591.2	591.2	588.4	590.3	590.3
5°	590.3	589.3	586.5	589.3	589.3
7.5°	587.5	586.5	584.7	587.5	586.5
10°	581.9	581.9	580.0	582.8	582.8
12.5°	577.2	576.3	575.4	579.1	578.2
15°	569.8	569.8	568.8	573.5	572.6
17.5°	560.5	561.4	562.3	566.1	567.0
20°	550.2	552.1	553.0	558.6	558.6
22.5°	540.9	541.9	543.7	549.3	549.3
25°	528.8	530.7	534.4	539.1	540.0
27.5°	516.7	517.6	522.3	528.8	529.7
30°	500.9	503.7	509.3	516.7	517.6
32.5°	486.9	489.7	496.2	503.7	505.5
35°	469.2	473.0	480.4	489.7	491.6
37.5°	453.4	456.2	465.5	475.7	478.5
40°	433.9	439.4	448.7	460.9	465.5
42.5°	414.3	419.9	431.1	446.9	452.5
45°	393.8	400.3	414.3	432.0	439.4
47.5°	373.3	380.8	396.6	417.1	425.5
50°	350.1	359.4	378.9	402.2	411.5
52.5°	327.7	338.9	360.3	386.4	398.5
55°	304.4	315.6	343.5	370.5	383.6
57.5°	278.4	293.3	324.0	354.7	368.7
60°	254.2	268.1	305.4	338.9	352.9
62.5°	228.1	246.7	286.8	322.1	336.1
65°	201.1	221.6	267.2	302.6	316.5
67.5°	176.9	199.2	247.6	283.0	297.0
70°	148.0	176.0	226.2	261.6	275.6
72.5°	121.0	151.8	203.9	238.3	251.4
75°	95.0	129.4	180.6	211.3	217.9
77.5°	70.8	107.1	156.4	169.4	164.8
80°	50.3	85.7	122.0	115.4	118.2
82.5°	32.6	65.2	75.4	85.7	88.4
85°	18.6	38.2	46.6	50.3	52.1
87.5°	8.4	14.0	18.6	18.6	17.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)