

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: P309880

Luminaire Tested: **24FCZ2-30-UNV-L82765-RDP-CP125-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: P309880
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: 24FCZ2-30-UNV-L82765-RDP-CP125-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" POLYCARB SHEET
Light Source: (168) 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: 1780.0 lumens
Efficiency: N/A
Efficacy: 75.7 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

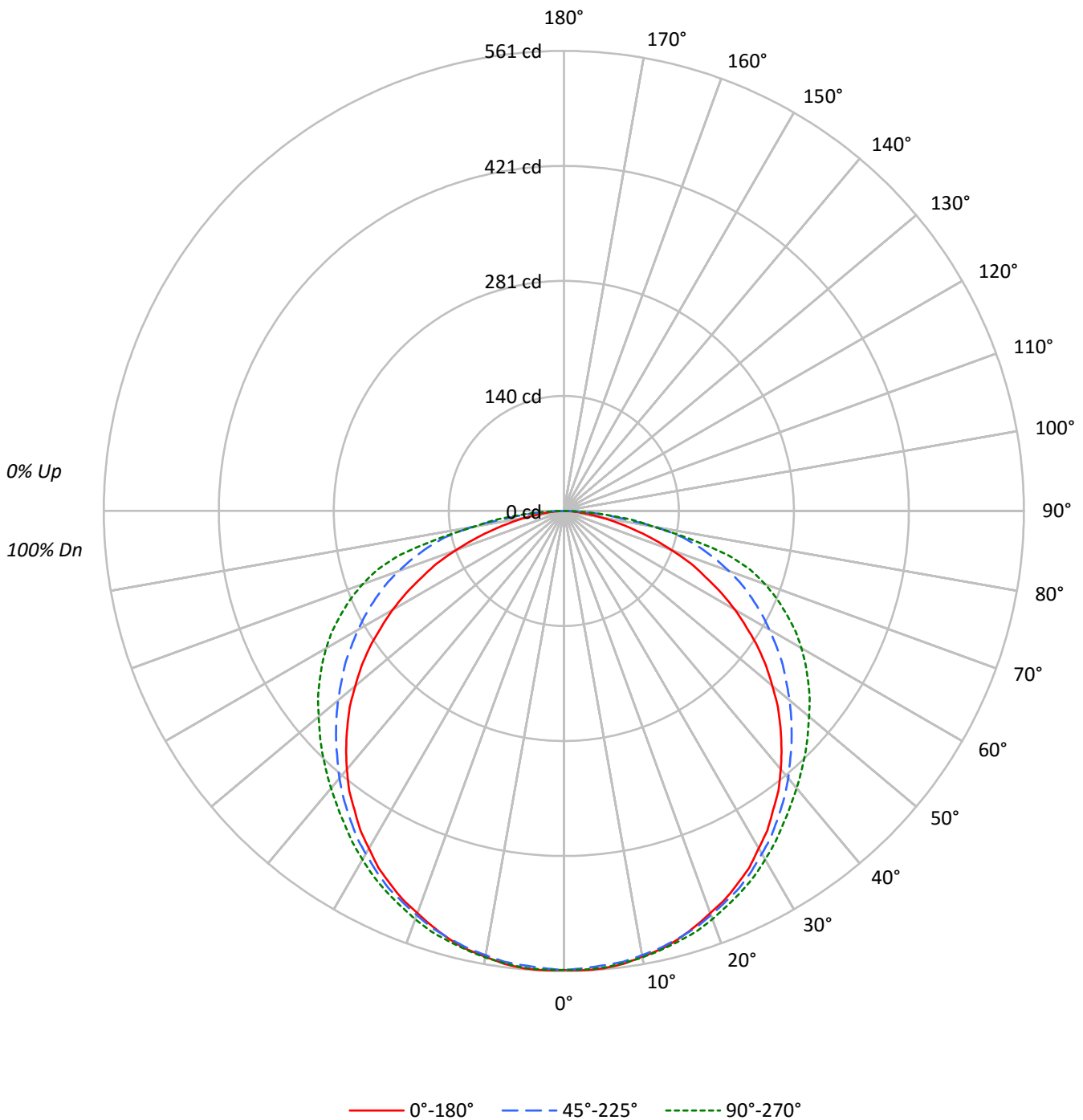
Input Watts (W): 23.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	753	753	753
5°	756	751	755
10°	754	751	755
15°	753	751	756
20°	747	751	758
25°	745	752	760
30°	738	750	763
35°	731	748	766
40°	723	748	775
45°	711	748	793
50°	695	752	817
55°	677	764	853
60°	649	779	900
65°	607	807	956
70°	552	844	1028
75°	468	891	1074
80°	370	896	869
85°	273	681	763



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	53.1	3.0
10°-20°	152.8	8.6
20°-30°	233.7	13.1
30°-40°	285.7	16.0
40°-50°	304.5	17.1
50°-60°	291.1	16.4
60°-70°	246.6	13.9
70°-80°	165.7	9.3
80°-90°	46.8	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°	439.6	24.7
0°-40°	725.3	40.7
0°-60°	1320.9	74.2
0°-90°	1780.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1780.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	560	560	560	560	560	
5°	560	559	556	559	559	53
15°	540	540	540	544	543	152
25°	502	503	507	511	512	231
35°	445	448	456	464	466	279
45°	374	380	393	410	417	288
55°	289	299	326	351	364	257
65°	191	210	253	287	300	189
75°	90	123	171	200	207	96
85°	18	36	44	48	49	22
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	559.8	559.8	559.8	559.8	559.8
2.5°	560.6	560.6	558.0	559.8	559.8
5°	559.8	558.9	556.2	558.9	558.9
7.5°	557.1	556.2	554.5	557.1	556.2
10°	551.8	551.8	550.0	552.7	552.7
12.5°	547.4	546.5	545.6	549.2	548.3
15°	540.3	540.3	539.5	543.9	543.0
17.5°	531.5	532.4	533.3	536.8	537.7
20°	521.8	523.6	524.4	529.7	529.7
22.5°	513.0	513.8	515.6	520.9	520.9
25°	501.5	503.3	506.8	511.2	512.1
27.5°	490.0	490.9	495.3	501.5	502.4
30°	475.0	477.6	482.9	490.0	490.9
32.5°	461.8	464.4	470.6	477.6	479.4
35°	445.0	448.5	455.6	464.4	466.2
37.5°	430.0	432.6	441.5	451.2	453.8
40°	411.4	416.7	425.6	437.0	441.5
42.5°	392.9	398.2	408.8	423.8	429.1
45°	373.5	379.6	392.9	409.7	416.7
47.5°	354.0	361.1	376.1	395.5	403.5
50°	332.0	340.8	359.3	381.4	390.2
52.5°	310.8	321.4	341.7	366.4	377.9
55°	288.7	299.3	325.8	351.4	363.8
57.5°	264.0	278.1	307.2	336.4	349.6
60°	241.0	254.3	289.6	321.4	334.6
62.5°	216.3	234.0	271.9	305.5	318.7
65°	190.7	210.1	253.4	286.9	300.2
67.5°	167.8	188.9	234.9	268.4	281.6
70°	140.4	166.9	214.5	248.1	261.3
72.5°	114.8	143.9	193.4	226.0	238.4
75°	90.1	122.7	171.3	200.4	206.6
77.5°	67.1	101.5	148.3	160.7	156.3
80°	47.7	81.2	115.7	109.5	112.1
82.5°	30.9	61.8	71.5	81.2	83.9
85°	17.7	36.2	44.1	47.7	49.4
87.5°	7.9	13.2	17.7	17.7	16.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)