

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: P309898

Luminaire Tested: **24FCZ2-30-UNV-L82765-RDP-CP250-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: P309898
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-CP250-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.250" 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: 1690.0 lumens
Efficiency: N/A
Efficacy: 71.9 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

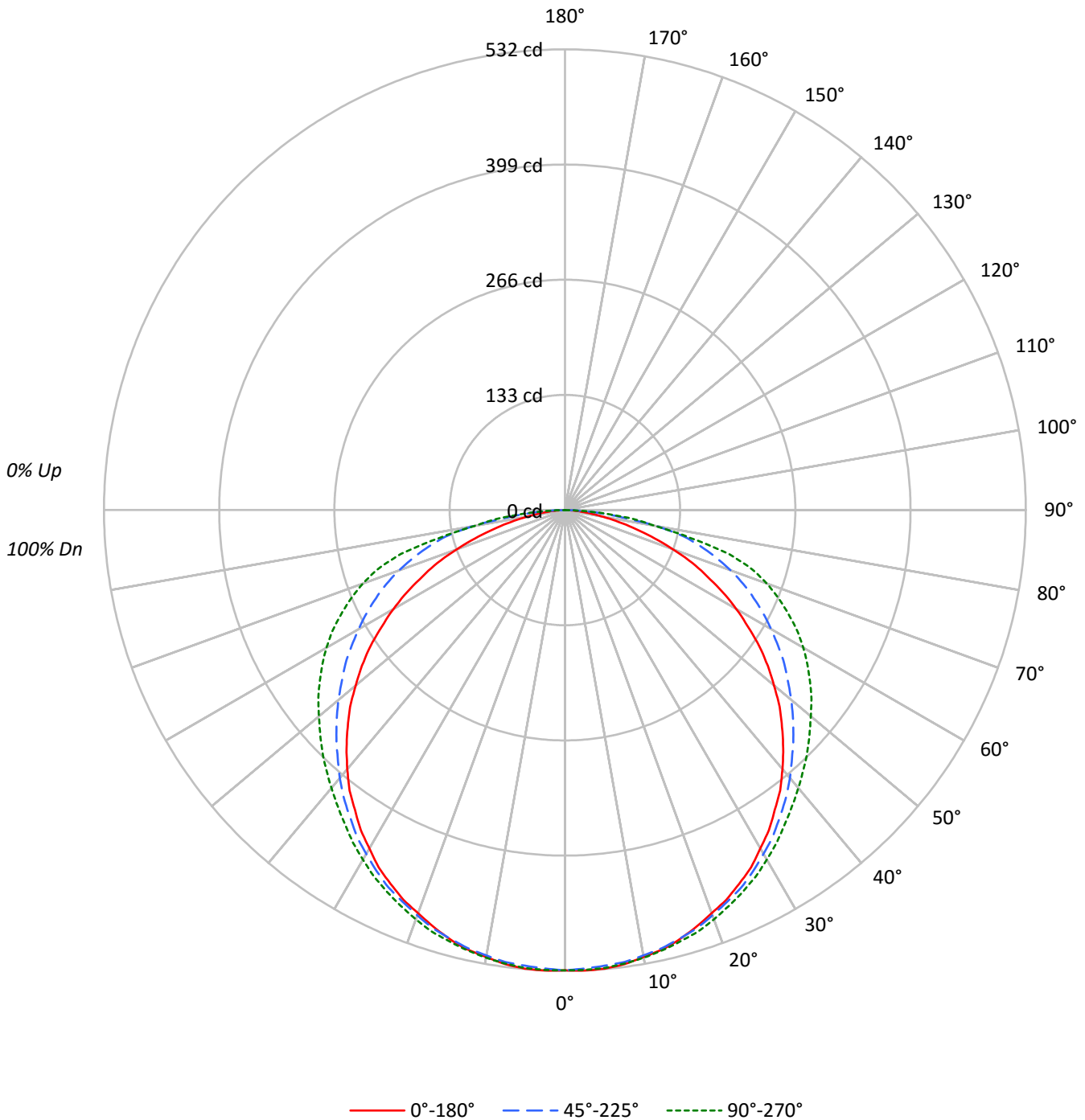
Input Watts (W): 23.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	715	715	715
5°	718	713	717
10°	716	713	717
15°	715	713	718
20°	709	713	720
25°	707	714	722
30°	701	712	724
35°	694	710	727
40°	686	710	736
45°	675	710	753
50°	660	714	776
55°	643	726	810
60°	616	740	855
65°	577	766	907
70°	524	801	976
75°	444	845	1020
80°	351	851	825
85°	259	647	724



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	50.4	3.0
10°-20°	145.1	8.6
20°-30°	221.9	13.1
30°-40°	271.2	16.0
40°-50°	289.1	17.1
50°-60°	276.4	16.4
60°-70°	234.1	13.9
70°-80°	157.4	9.3
80°-90°	44.4	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°	417.4	24.7
0°-40°	688.6	40.7
0°-60°	1254.1	74.2
0°-90°	1690.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1690.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	532	532	532	532	532	
5°	532	531	528	531	531	50
15°	513	513	512	516	516	145
25°	476	478	481	485	486	219
35°	422	426	432	441	443	265
45°	355	360	373	389	396	273
55°	274	284	309	334	345	244
65°	181	200	241	272	285	180
75°	86	116	163	190	196	92
85°	17	34	42	45	47	21
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	531.5	531.5	531.5	531.5	531.5
2.5°	532.3	532.3	529.8	531.5	531.5
5°	531.5	530.6	528.1	530.6	530.6
7.5°	528.9	528.1	526.4	528.9	528.1
10°	523.9	523.9	522.2	524.8	524.8
12.5°	519.7	518.9	518.0	521.4	520.6
15°	513.0	513.0	512.2	516.4	515.5
17.5°	504.6	505.5	506.3	509.7	510.5
20°	495.4	497.1	497.9	503.0	503.0
22.5°	487.0	487.9	489.5	494.6	494.6
25°	476.1	477.8	481.2	485.4	486.2
27.5°	465.2	466.1	470.3	476.1	477.0
30°	451.0	453.5	458.5	465.2	466.1
32.5°	438.4	440.9	446.8	453.5	455.2
35°	422.5	425.8	432.5	440.9	442.6
37.5°	408.2	410.7	419.1	428.4	430.9
40°	390.6	395.7	404.0	414.9	419.1
42.5°	373.0	378.1	388.1	402.4	407.4
45°	354.6	360.5	373.0	389.0	395.7
47.5°	336.1	342.8	357.1	375.5	383.1
50°	315.2	323.6	341.2	362.1	370.5
52.5°	295.1	305.1	324.4	347.9	358.8
55°	274.1	284.2	309.3	333.6	345.4
57.5°	250.6	264.1	291.7	319.4	332.0
60°	228.8	241.4	274.9	305.1	317.7
62.5°	205.4	222.1	258.2	290.0	302.6
65°	181.1	199.5	240.6	272.4	285.0
67.5°	159.3	179.4	223.0	254.8	267.4
70°	133.3	158.4	203.7	235.6	248.1
72.5°	109.0	136.6	183.6	214.6	226.3
75°	85.5	116.5	162.6	190.3	196.2
77.5°	63.7	96.4	140.8	152.6	148.4
80°	45.3	77.1	109.8	103.9	106.5
82.5°	29.3	58.7	67.9	77.1	79.6
85°	16.8	34.4	41.9	45.3	46.9
87.5°	7.5	12.6	16.8	16.8	15.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)