

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: P309861

Luminaire Tested: **24FCZ2-30-UNV-L82765-RDP-CA08-W2A-U-3000K**

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: P309861
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-CA08-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.08" ACRYLIC SHEET
Light Source: (168) 3000K 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: 1760.0 lumens
Efficiency: N/A
Efficacy: 75.9 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

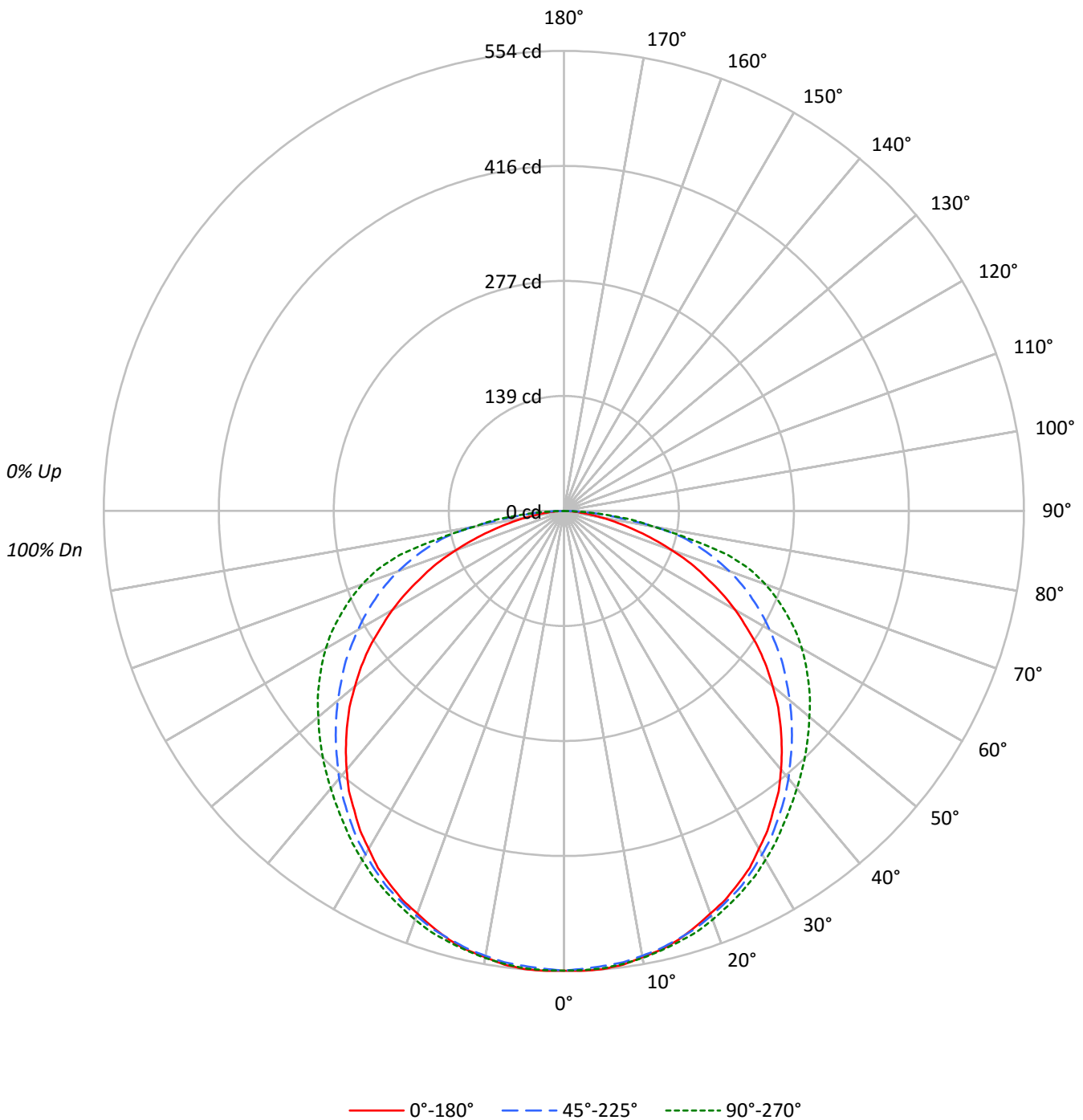
Input Watts (W): 23.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	745	745	745
5°	748	743	746
10°	745	743	747
15°	744	743	748
20°	739	743	750
25°	736	744	752
30°	730	742	754
35°	723	740	757
40°	715	739	767
45°	703	739	784
50°	687	744	808
55°	670	756	844
60°	641	770	890
65°	600	798	945
70°	546	834	1017
75°	463	881	1062
80°	365	886	859
85°	270	673	755



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	52.5	3.0
10°-20°	151.1	8.6
20°-30°	231.1	13.1
30°-40°	282.5	16.0
40°-50°	301.1	17.1
50°-60°	287.8	16.4
60°-70°	243.8	13.9
70°-80°	163.9	9.3
80°-90°	46.2	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°	434.7	24.7
0°-40°	717.2	40.7
0°-60°	1306.1	74.2
0°-90°	1760.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1760.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	554	554	554	554	554	
5°	554	553	550	553	553	53
15°	534	534	533	538	537	151
25°	496	498	501	506	506	229
35°	440	444	450	459	461	276
45°	369	375	388	405	412	285
55°	286	296	322	347	360	254
65°	189	208	250	284	297	187
75°	89	121	169	198	204	95
85°	18	36	44	47	49	22
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	553.5	553.5	553.5	553.5	553.5
2.5°	554.3	554.3	551.7	553.5	553.5
5°	553.5	552.6	550.0	552.6	552.6
7.5°	550.9	550.0	548.2	550.9	550.0
10°	545.6	545.6	543.9	546.5	546.5
12.5°	541.2	540.4	539.5	543.0	542.1
15°	534.3	534.3	533.4	537.8	536.9
17.5°	525.5	526.4	527.3	530.8	531.6
20°	515.9	517.7	518.6	523.8	523.8
22.5°	507.2	508.1	509.8	515.1	515.1
25°	495.9	497.6	501.1	505.5	506.3
27.5°	484.5	485.4	489.7	495.9	496.7
30°	469.7	472.3	477.5	484.5	485.4
32.5°	456.6	459.2	465.3	472.3	474.0
35°	440.0	443.5	450.5	459.2	460.9
37.5°	425.1	427.8	436.5	446.1	448.7
40°	406.8	412.0	420.8	432.1	436.5
42.5°	388.5	393.7	404.2	419.0	424.3
45°	369.3	375.4	388.5	405.1	412.0
47.5°	350.1	357.0	371.9	391.1	399.0
50°	328.2	337.0	355.3	377.1	385.9
52.5°	307.3	317.8	337.8	362.3	373.6
55°	285.5	295.9	322.1	347.4	359.7
57.5°	261.0	275.0	303.8	332.6	345.7
60°	238.3	251.4	286.3	317.8	330.9
62.5°	213.9	231.3	268.9	302.1	315.1
65°	188.6	207.8	250.5	283.7	296.8
67.5°	165.9	186.8	232.2	265.4	278.5
70°	138.8	165.0	212.1	245.3	258.4
72.5°	113.5	142.3	191.2	223.5	235.7
75°	89.0	121.3	169.4	198.2	204.3
77.5°	66.3	100.4	146.7	158.9	154.5
80°	47.1	80.3	114.4	108.2	110.9
82.5°	30.6	61.1	70.7	80.3	82.9
85°	17.5	35.8	43.6	47.1	48.9
87.5°	7.9	13.1	17.5	17.5	16.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)