

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: P309951

Luminaire Tested: **24FCZ2-35-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: P309951
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: 24FCZ2-35-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: 2065.0 lumens
Efficiency: N/A
Efficacy: 74.3 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

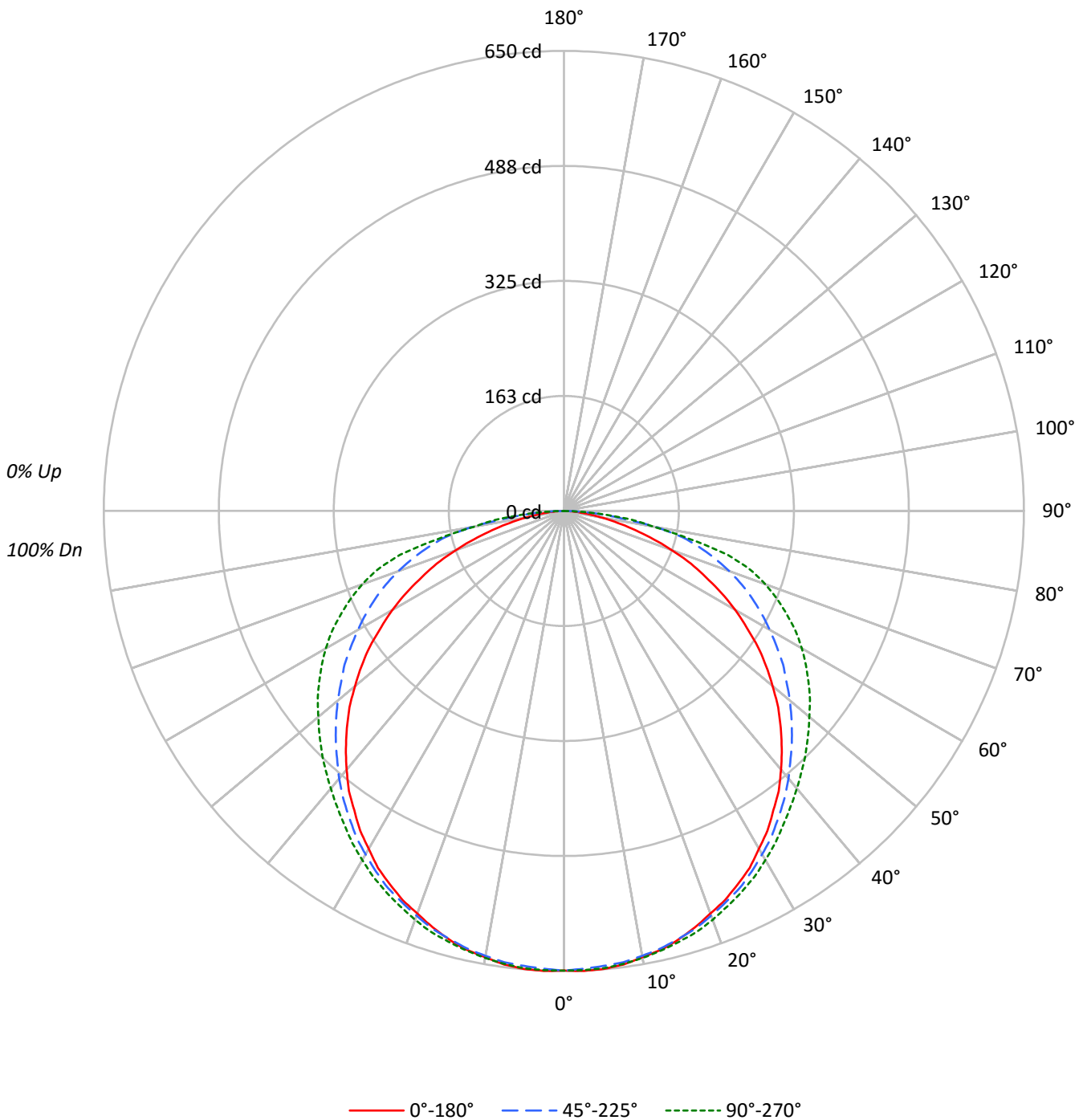
Input Watts (W): 27.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	874	874	874
5°	877	872	876
10°	875	872	876
15°	873	872	877
20°	867	871	880
25°	864	873	882
30°	856	871	885
35°	848	868	888
40°	838	867	899
45°	824	867	920
50°	806	873	948
55°	786	887	990
60°	752	904	1045
65°	704	936	1109
70°	641	979	1193
75°	543	1033	1246
80°	428	1040	1008
85°	316	790	886



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	61.6	3.0
10°-20°	177.3	8.6
20°-30°	271.1	13.1
30°-40°	331.4	16.0
40°-50°	353.2	17.1
50°-60°	337.7	16.4
60°-70°	286.1	13.9
70°-80°	192.3	9.3
80°-90°	54.2	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°	510.0	24.7
0°-40°	841.4	40.7
0°-60°	1532.4	74.2
0°-90°	2065.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2065.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	649	649	649	649	649	
5°	649	648	645	648	648	62
15°	627	627	626	631	630	177
25°	582	584	588	593	594	268
35°	516	520	528	539	541	323
45°	433	440	456	475	484	334
55°	335	347	378	408	422	298
65°	221	244	294	333	348	220
75°	104	142	199	232	240	112
85°	20	42	51	55	57	25
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	649.4	649.4	649.4	649.4	649.4
2.5°	650.4	650.4	647.3	649.4	649.4
5°	649.4	648.4	645.3	648.4	648.4
7.5°	646.3	645.3	643.2	646.3	645.3
10°	640.2	640.2	638.1	641.2	641.2
12.5°	635.0	634.0	633.0	637.1	636.1
15°	626.8	626.8	625.8	630.9	629.9
17.5°	616.6	617.6	618.7	622.8	623.8
20°	605.3	607.4	608.4	614.6	614.6
22.5°	595.1	596.1	598.2	604.3	604.3
25°	581.8	583.8	587.9	593.0	594.1
27.5°	568.5	569.5	574.6	581.8	582.8
30°	551.1	554.1	560.3	568.5	569.5
32.5°	535.7	538.8	545.9	554.1	556.2
35°	516.2	520.3	528.5	538.8	540.8
37.5°	498.8	501.9	512.1	523.4	526.5
40°	477.3	483.5	493.7	507.0	512.1
42.5°	455.8	461.9	474.2	491.6	497.8
45°	433.3	440.4	455.8	475.3	483.5
47.5°	410.7	418.9	436.3	458.9	468.1
50°	385.1	395.4	416.9	442.5	452.7
52.5°	360.5	372.8	396.4	425.1	438.4
55°	334.9	347.2	378.0	407.7	422.0
57.5°	306.3	322.6	356.4	390.2	405.6
60°	279.6	295.0	336.0	372.8	388.2
62.5°	250.9	271.4	315.5	354.4	369.8
65°	221.2	243.8	294.0	332.9	348.2
67.5°	194.6	219.2	272.5	311.4	326.7
70°	162.9	193.6	248.9	287.8	303.2
72.5°	133.2	167.0	224.3	262.2	276.6
75°	104.5	142.4	198.7	232.5	239.7
77.5°	77.8	117.8	172.1	186.4	181.3
80°	55.3	94.2	134.2	127.0	130.1
82.5°	35.8	71.7	83.0	94.2	97.3
85°	20.5	42.0	51.2	55.3	57.4
87.5°	9.2	15.4	20.5	20.5	19.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)