

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: P313066

Luminaire Tested: **24FCZ2-30-UNV-L83050-HRP-CA08-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: P313066
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-20)
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-L83050-HRP-CA08-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.08" ACRYLIC 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: 2154.0 lumens
Efficiency: N/A
Efficacy: 92.1 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

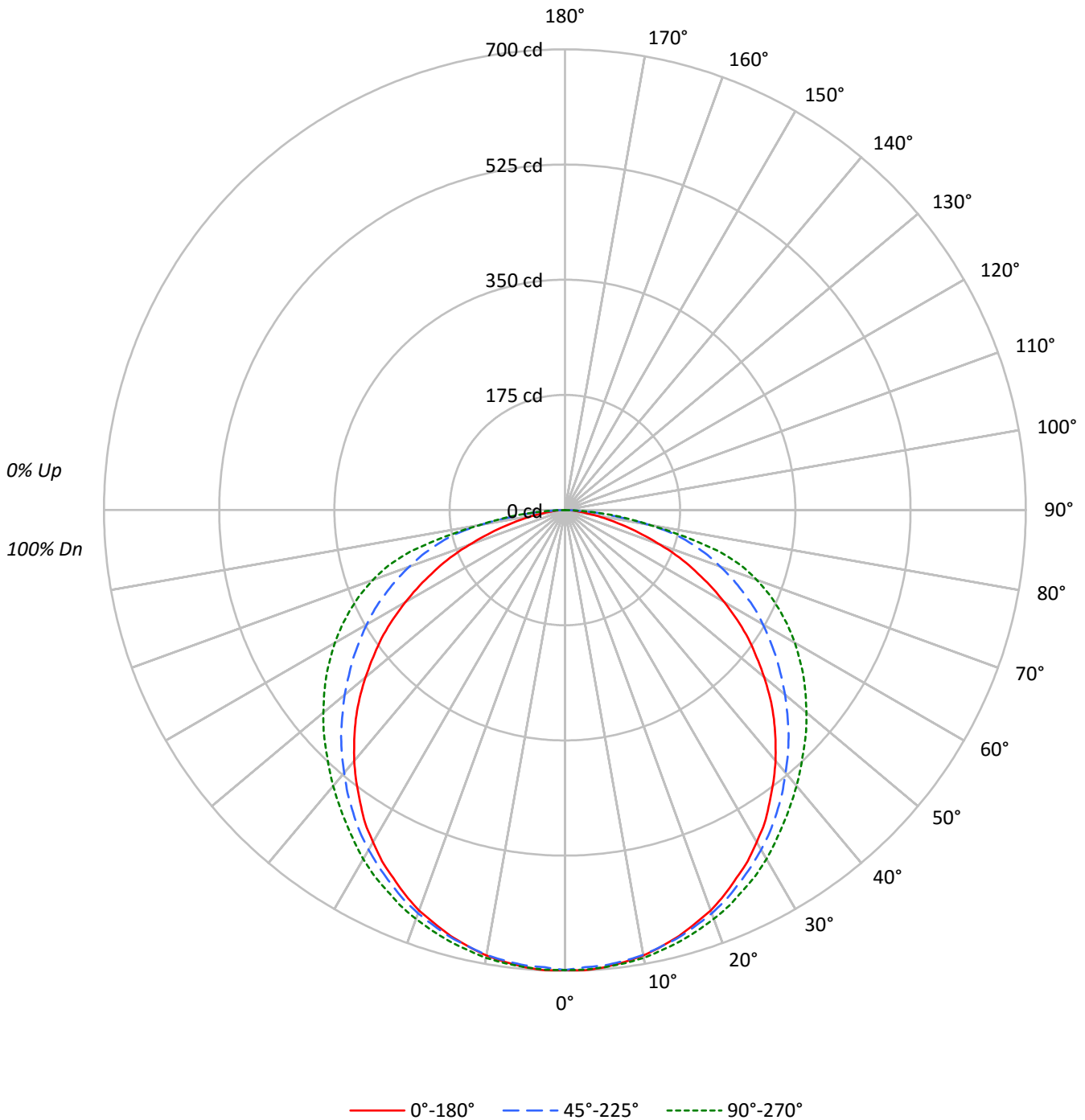
Input Watts (W): 23.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	101	96	93	96	93	90	92	90	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	59	68	63	58	56
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	36	30	57	44	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	24	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	940	940	940
5°	942	938	942
10°	939	938	944
15°	933	936	945
20°	927	934	946
25°	916	929	948
30°	905	926	951
35°	890	921	952
40°	874	915	961
45°	855	914	976
50°	827	914	1002
55°	798	920	1039
60°	752	934	1085
65°	695	956	1145
70°	607	990	1220
75°	492	1041	1261
80°	363	1020	1020
85°	278	752	849



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	66.2	3.1
10°-20°	190.1	8.8
20°-30°	289.4	13.4
30°-40°	351.4	16.3
40°-50°	371.3	17.2
50°-60°	350.3	16.3
60°-70°	291.3	13.5
70°-80°	191.7	8.9
80°-90°	52.2	2.4
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°	545.7	25.3
0°-40°	897.2	41.7
0°-60°	1618.8	75.2
0°-90°	2154.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2154.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	699	699	699	699	699	
5°	697	697	694	697	697	66
15°	670	671	672	678	678	189
25°	617	620	626	637	638	285
35°	542	548	561	575	580	339
45°	449	458	481	504	513	346
55°	340	354	392	429	443	303
65°	218	244	300	344	360	216
75°	95	138	200	237	243	102
85°	18	40	49	54	55	22
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	698.9	698.9	698.9	698.9	698.9
2.5°	699.8	698.9	695.3	698.9	698.9
5°	697.1	697.1	694.4	697.1	697.1
7.5°	692.6	692.6	690.8	694.4	694.4
10°	687.1	687.1	686.2	690.8	690.8
12.5°	679.0	679.9	679.0	684.4	684.4
15°	670.0	670.9	671.8	678.1	678.1
17.5°	658.3	660.1	661.9	669.1	670.0
20°	647.5	648.4	652.0	660.1	661.0
22.5°	633.0	635.7	640.3	648.4	651.1
25°	616.8	620.4	625.8	636.6	638.4
27.5°	601.5	604.2	611.4	623.1	626.7
30°	582.5	587.0	596.1	607.8	612.3
32.5°	564.5	569.0	579.8	592.5	596.1
35°	542.0	548.3	560.9	575.3	579.8
37.5°	520.3	526.6	542.0	558.2	563.6
40°	497.8	505.0	521.2	540.2	547.4
42.5°	473.4	483.3	501.4	522.1	530.2
45°	449.1	458.1	480.6	504.1	513.1
47.5°	422.9	433.7	458.1	486.1	496.9
50°	395.0	408.5	436.5	467.1	478.8
52.5°	367.0	382.3	413.9	448.2	460.8
55°	340.0	354.4	392.3	429.2	442.8
57.5°	310.2	328.2	369.7	409.4	422.9
60°	279.5	299.4	347.2	388.7	403.1
62.5°	248.9	271.4	325.5	367.0	382.3
65°	218.2	243.5	300.3	344.5	359.8
67.5°	188.5	216.4	276.8	321.0	336.4
70°	154.2	189.4	251.6	294.9	310.2
72.5°	122.6	163.2	227.2	267.8	281.4
75°	94.7	138.0	200.2	237.2	242.6
77.5°	69.4	112.7	172.2	184.9	185.8
80°	46.9	90.2	131.7	129.9	131.7
82.5°	30.7	67.6	83.0	92.9	93.8
85°	18.0	39.7	48.7	54.1	55.0
87.5°	9.0	13.5	17.1	18.0	19.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)