

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: P313067

Luminaire Tested: **24FCZ2-30-UNV-L83050-HRP-CA08-W2A-U-4000K**

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: P313067
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-4000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.08" ACRYLIC SHEET
Light Source: (168) 4000K 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: 2262.0 lumens
Efficiency: N/A
Efficacy: 94.6 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

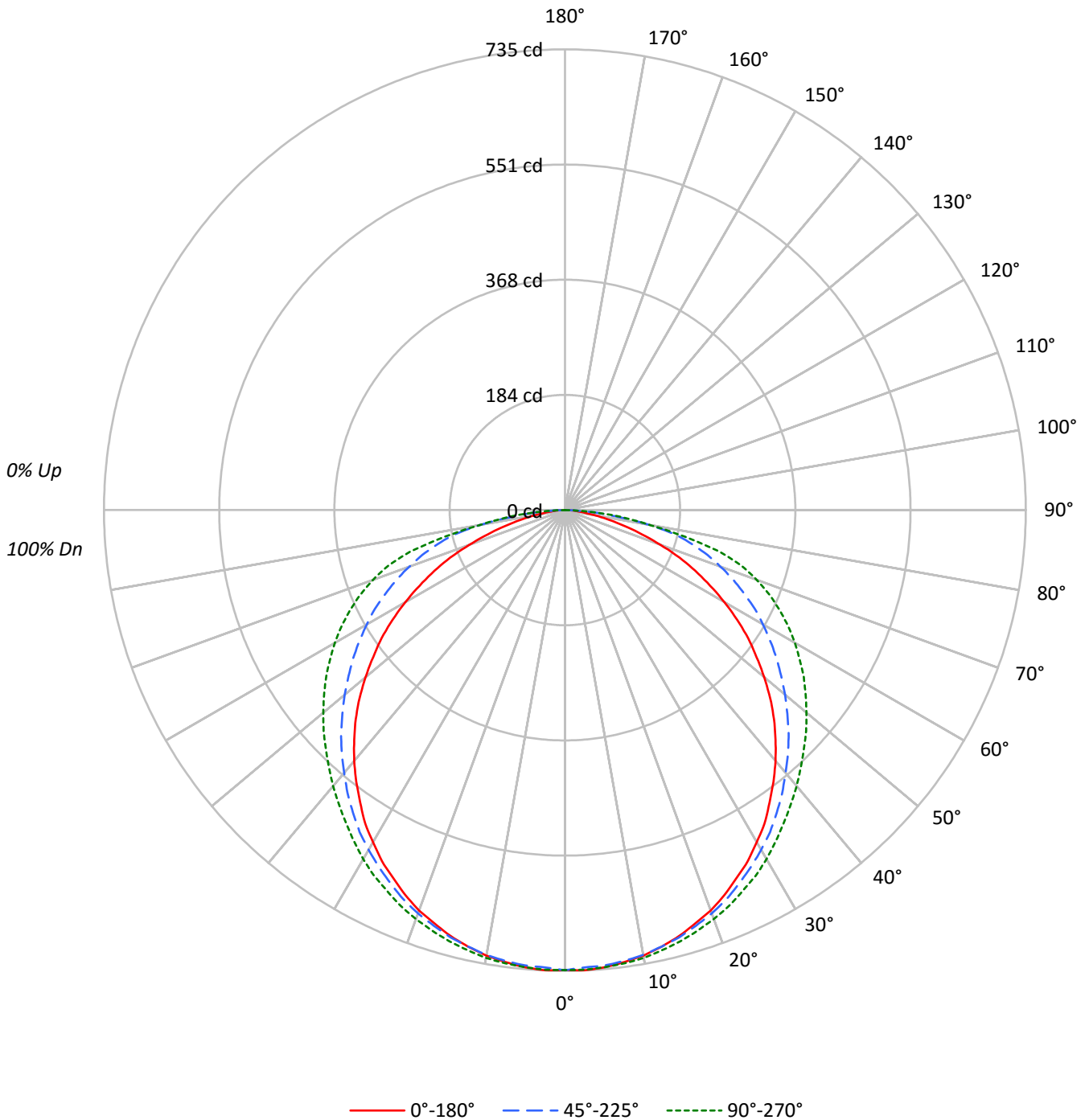
Input Watts (W): 23.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P313067

CATALOG NUMBER: 24FCZ2-30-UNV-L83050-HRP-CA08-W2A-U-4000K

Luminous Intensity Polar Plot





TEST NUMBER: P313067

CATALOG NUMBER: 24FCZ2-30-UNV-L83050-HRP-CA08-W2A-U-4000K

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°	987	987	987
5°	989	985	989
10°	986	985	991
15°	980	983	992
20°	974	980	994
25°	962	976	995
30°	950	973	999
35°	935	967	1000
40°	918	961	1010
45°	897	960	1025
50°	868	959	1052
55°	837	966	1091
60°	790	981	1139
65°	730	1004	1203
70°	637	1039	1282
75°	517	1093	1324
80°	381	1072	1072
85°	292	789	892



TEST NUMBER: P313067

CATALOG NUMBER: 24FCZ2-30-UNV-L83050-HRP-CA08-W2A-U-4000K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	69.5	3.1
10°-20°	199.7	8.8
20°-30°	303.9	13.4
30°-40°	369.1	16.3
40°-50°	389.9	17.2
50°-60°	367.9	16.3
60°-70°	305.9	13.5
70°-80°	201.3	8.9
80°-90°	54.9	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°	573.1	25.3
0°-40°	942.2	41.7
0°-60°	1700.0	75.2
0°-90°	2262.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2262.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	734	734	734	734	734	
5°	732	732	729	732	732	70
15°	704	705	706	712	712	198
25°	648	652	657	669	670	299
35°	569	576	589	604	609	356
45°	472	481	505	529	539	363
55°	357	372	412	451	465	318
65°	229	256	315	362	378	227
75°	99	145	210	249	255	107
85°	19	42	51	57	58	23
90°	0	0	0	0	0	



TEST NUMBER: P313067

CATALOG NUMBER: 24FCZ2-30-UNV-L83050-HRP-CA08-W2A-U-4000K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	733.9	733.9	733.9	733.9	733.9
2.5°	734.9	733.9	730.1	733.9	733.9
5°	732.0	732.0	729.2	732.0	732.0
7.5°	727.3	727.3	725.4	729.2	729.2
10°	721.6	721.6	720.6	725.4	725.4
12.5°	713.1	714.0	713.1	718.8	718.8
15°	703.6	704.6	705.5	712.1	712.1
17.5°	691.3	693.2	695.1	702.7	703.6
20°	679.9	680.9	684.7	693.2	694.1
22.5°	664.8	667.6	672.4	680.9	683.7
25°	647.7	651.5	657.2	668.6	670.5
27.5°	631.6	634.5	642.1	654.4	658.1
30°	611.7	616.5	626.0	638.3	643.0
32.5°	592.8	597.5	608.9	622.2	626.0
35°	569.1	575.8	589.0	604.2	608.9
37.5°	546.4	553.0	569.1	586.2	591.9
40°	522.7	530.3	547.4	567.2	574.8
42.5°	497.2	507.6	526.5	548.3	556.8
45°	471.6	481.1	504.7	529.4	538.8
47.5°	444.1	455.5	481.1	510.4	521.8
50°	414.8	429.0	458.3	490.5	502.8
52.5°	385.4	401.5	434.7	470.6	483.9
55°	357.0	372.2	411.9	450.8	465.0
57.5°	325.8	344.7	388.3	429.9	444.1
60°	293.6	314.4	364.6	408.1	423.3
62.5°	261.4	285.0	341.9	385.4	401.5
65°	229.2	255.7	315.3	361.7	377.8
67.5°	197.9	227.3	290.7	337.1	353.2
70°	161.9	198.9	264.2	309.7	325.8
72.5°	128.8	171.4	238.6	281.3	295.5
75°	99.4	144.9	210.2	249.1	254.7
77.5°	72.9	118.4	180.9	194.1	195.1
80°	49.2	94.7	138.3	136.4	138.3
82.5°	32.2	71.0	87.1	97.5	98.5
85°	18.9	41.7	51.1	56.8	57.8
87.5°	9.5	14.2	18.0	18.9	20.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)