

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: P313415

Luminaire Tested: **24FCZ2-30HE-UNV-L83050-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: P313415
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: 24FCZ2-30HE-UNV-L83050-RDP-CA08-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.08" ACRYLIC SHEET
Light Source: (336) 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: 1784.0 lumens
Efficiency: N/A
Efficacy: 84.5 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

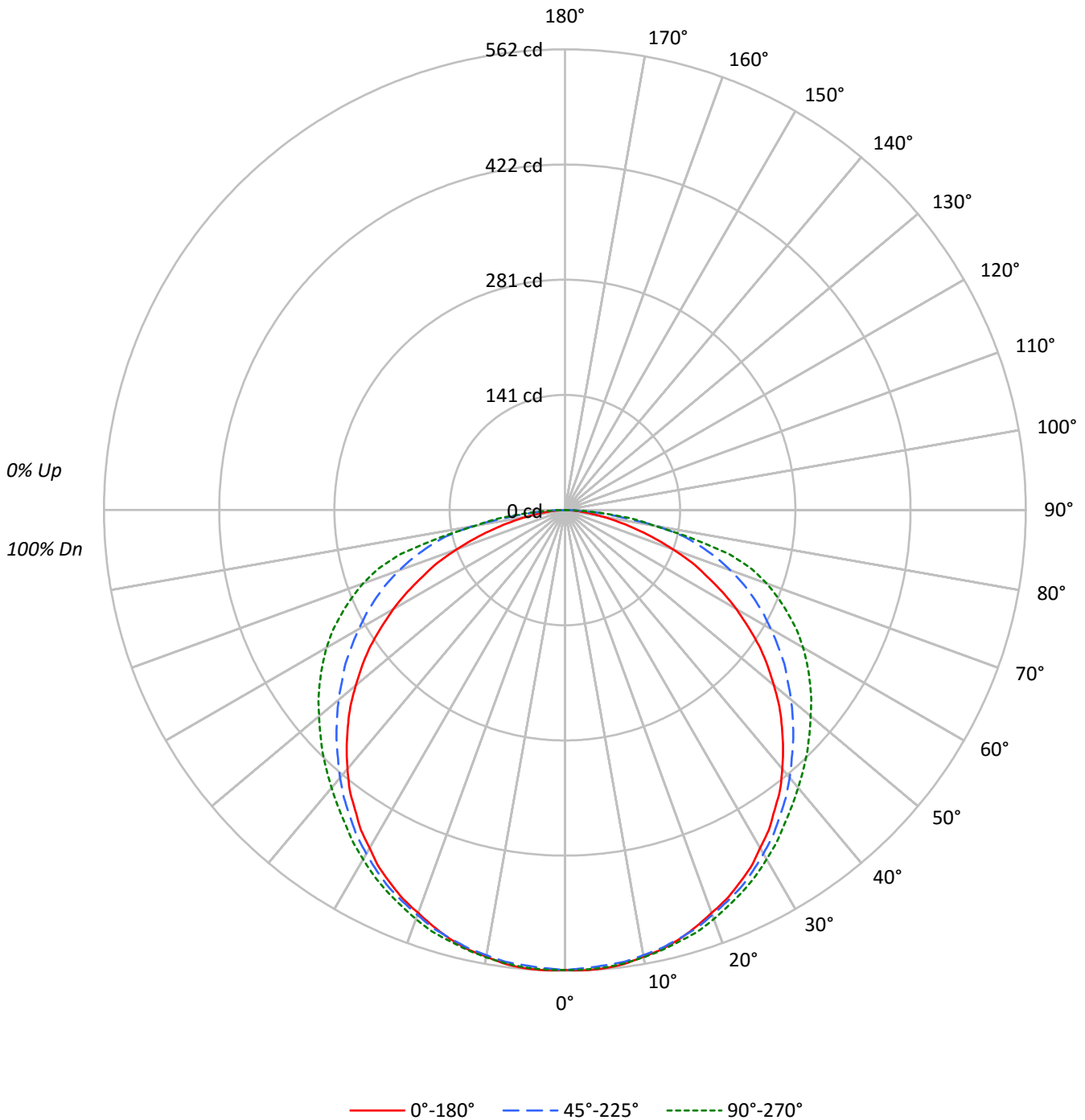
Input Watts (W): 21.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	755	755	755
5°	758	753	756
10°	756	753	757
15°	754	753	758
20°	749	753	760
25°	746	754	762
30°	740	752	764
35°	733	750	767
40°	724	749	777
45°	712	749	795
50°	696	754	819
55°	679	766	855
60°	650	781	903
65°	608	809	958
70°	554	846	1030
75°	469	893	1077
80°	370	898	871
85°	273	682	766



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	53.2	3.0
10°-20°	153.2	8.6
20°-30°	234.2	13.1
30°-40°	286.3	16.0
40°-50°	305.2	17.1
50°-60°	291.8	16.4
60°-70°	247.2	13.9
70°-80°	166.1	9.3
80°-90°	46.9	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°	440.6	24.7
0°-40°	726.9	40.7
0°-60°	1323.8	74.2
0°-90°	1784.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1784.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	561	561	561	561	561	
5°	561	560	558	560	560	53
15°	542	542	541	545	544	153
25°	503	504	508	512	513	232
35°	446	450	457	465	467	279
45°	374	380	394	411	418	289
55°	289	300	326	352	365	258
65°	191	211	254	288	301	190
75°	90	123	172	201	207	97
85°	18	36	44	48	50	22
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	561.0	561.0	561.0	561.0	561.0
2.5°	561.9	561.9	559.2	561.0	561.0
5°	561.0	560.1	557.5	560.1	560.1
7.5°	558.4	557.5	555.7	558.4	557.5
10°	553.1	553.1	551.3	553.9	553.9
12.5°	548.6	547.7	546.9	550.4	549.5
15°	541.5	541.5	540.7	545.1	544.2
17.5°	532.7	533.6	534.5	538.0	538.9
20°	523.0	524.7	525.6	530.9	530.9
22.5°	514.1	515.0	516.8	522.1	522.1
25°	502.6	504.4	507.9	512.3	513.2
27.5°	491.1	492.0	496.4	502.6	503.5
30°	476.1	478.7	484.0	491.1	492.0
32.5°	462.8	465.4	471.6	478.7	480.5
35°	446.0	449.5	456.6	465.4	467.2
37.5°	430.9	433.6	442.4	452.2	454.8
40°	412.4	417.7	426.5	438.0	442.4
42.5°	393.8	399.1	409.7	424.7	430.1
45°	374.3	380.5	393.8	410.6	417.7
47.5°	354.8	361.9	377.0	396.4	404.4
50°	332.7	341.6	360.1	382.3	391.1
52.5°	311.5	322.1	342.5	367.2	378.7
55°	289.4	300.0	326.5	352.2	364.6
57.5°	264.6	278.7	307.9	337.1	350.4
60°	241.6	254.8	290.2	322.1	335.4
62.5°	216.8	234.5	272.5	306.2	319.4
65°	191.1	210.6	254.0	287.6	300.9
67.5°	168.1	189.4	235.4	269.0	282.3
70°	140.7	167.2	215.0	248.7	261.9
72.5°	115.0	144.2	193.8	226.5	238.9
75°	90.3	123.0	171.7	200.9	207.1
77.5°	67.3	101.8	148.7	161.0	156.6
80°	47.8	81.4	115.9	109.7	112.4
82.5°	31.0	61.9	71.7	81.4	84.1
85°	17.7	36.3	44.2	47.8	49.6
87.5°	8.0	13.3	17.7	17.7	16.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)