

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: P309816

Luminaire Tested: **24FCZ2-30HE-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: P309816
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-L82765-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: 1782.0 lumens
Efficiency: N/A
Efficacy: 84.9 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

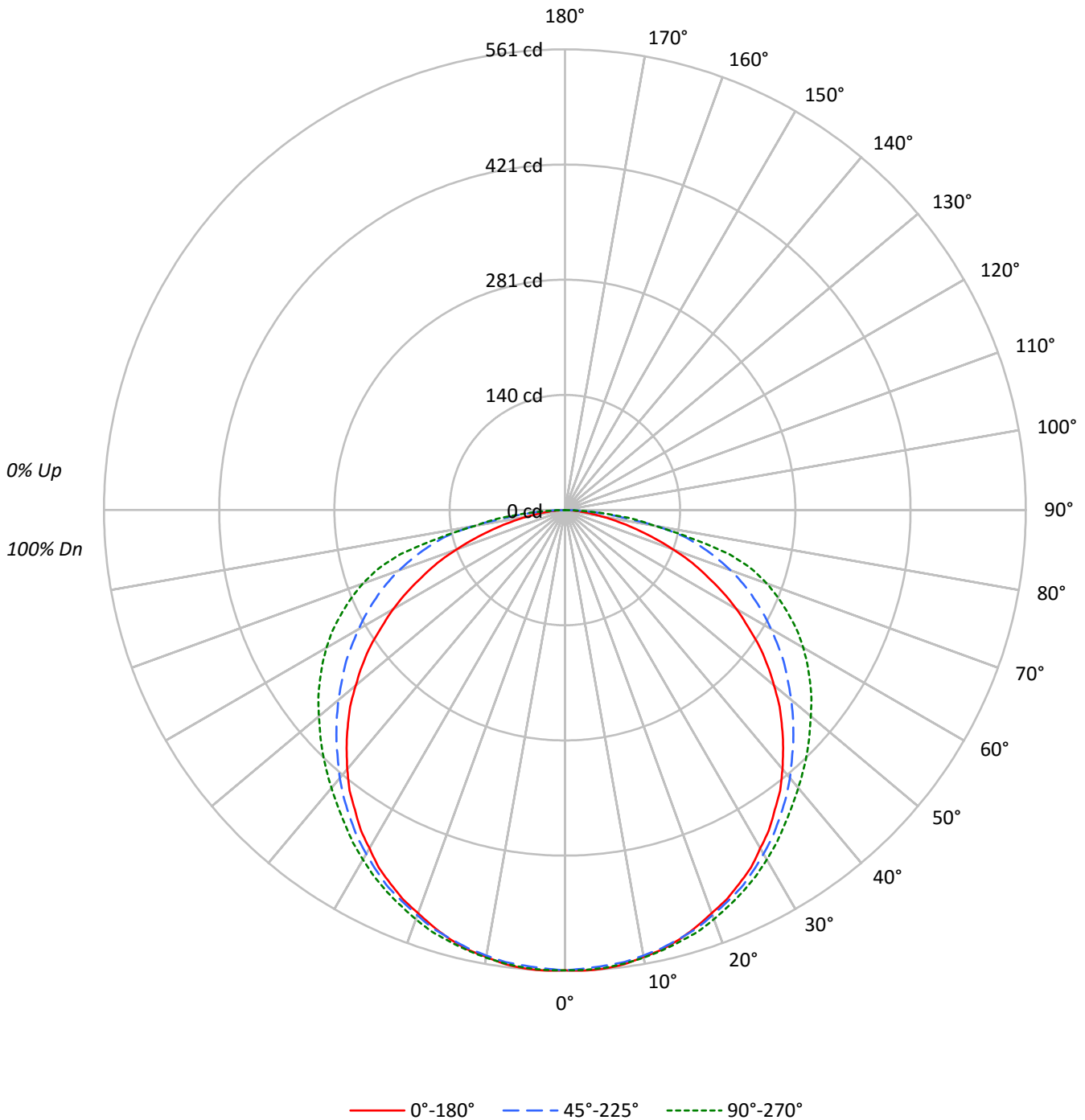
Input Watts (W): 21
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	754	754	754
5°	757	752	756
10°	755	752	756
15°	753	752	757
20°	748	752	759
25°	745	753	761
30°	739	751	763
35°	732	749	767
40°	723	748	776
45°	711	748	794
50°	696	753	818
55°	678	765	854
60°	649	780	901
65°	608	808	957
70°	553	845	1029
75°	469	892	1075
80°	370	897	870
85°	273	682	764



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	53.2	3.0
10°-20°	153.0	8.6
20°-30°	234.0	13.1
30°-40°	286.0	16.0
40°-50°	304.8	17.1
50°-60°	291.4	16.4
60°-70°	246.9	13.9
70°-80°	165.9	9.3
80°-90°	46.8	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°	440.1	24.7
0°-40°	726.1	40.7
0°-60°	1322.4	74.2
0°-90°	1782.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1782.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	560	560	560	560	560	
5°	560	560	557	560	560	53
15°	541	541	540	544	544	153
25°	502	504	507	512	513	231
35°	446	449	456	465	467	279
45°	374	380	393	410	417	288
55°	289	300	326	352	364	257
65°	191	210	254	287	300	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°	560.4	560.4	560.4	560.4	560.4
2.5°	561.3	561.3	558.6	560.4	560.4
5°	560.4	559.5	556.9	559.5	559.5
7.5°	557.7	556.9	555.1	557.7	556.9
10°	552.4	552.4	550.7	553.3	553.3
12.5°	548.0	547.1	546.2	549.8	548.9
15°	540.9	540.9	540.1	544.5	543.6
17.5°	532.1	533.0	533.9	537.4	538.3
20°	522.4	524.1	525.0	530.3	530.3
22.5°	513.5	514.4	516.2	521.5	521.5
25°	502.1	503.8	507.4	511.8	512.7
27.5°	490.6	491.4	495.9	502.1	502.9
30°	475.5	478.2	483.5	490.6	491.4
32.5°	462.3	464.9	471.1	478.2	480.0
35°	445.5	449.0	456.1	464.9	466.7
37.5°	430.5	433.1	441.9	451.7	454.3
40°	411.9	417.2	426.0	437.5	441.9
42.5°	393.3	398.6	409.2	424.3	429.6
45°	373.9	380.1	393.3	410.1	417.2
47.5°	354.4	361.5	376.5	396.0	403.9
50°	332.3	341.2	359.7	381.8	390.7
52.5°	311.1	321.7	342.1	366.8	378.3
55°	289.0	299.6	326.2	351.8	364.2
57.5°	264.3	278.4	307.6	336.8	350.0
60°	241.3	254.6	289.9	321.7	335.0
62.5°	216.6	234.2	272.2	305.8	319.1
65°	190.9	210.4	253.7	287.3	300.5
67.5°	167.9	189.2	235.1	268.7	282.0
70°	140.5	167.1	214.8	248.4	261.6
72.5°	114.9	144.1	193.6	226.3	238.7
75°	90.2	122.9	171.5	200.6	206.8
77.5°	67.2	101.6	148.5	160.9	156.4
80°	47.7	81.3	115.8	109.6	112.3
82.5°	30.9	61.9	71.6	81.3	84.0
85°	17.7	36.2	44.2	47.7	49.5
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)