

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: P309185

Luminaire Tested: **24FCZ2-30-UNV-L82765-HRP-CA08-W2A-U-2700K**

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: P309185
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-L82765-HRP-CA08-W2A-U-2700K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.08"
ACRYLIC SHEET
Light Source: (168) 2700K 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: 1930.0 lumens
Efficiency: N/A
Efficacy: 82.5 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

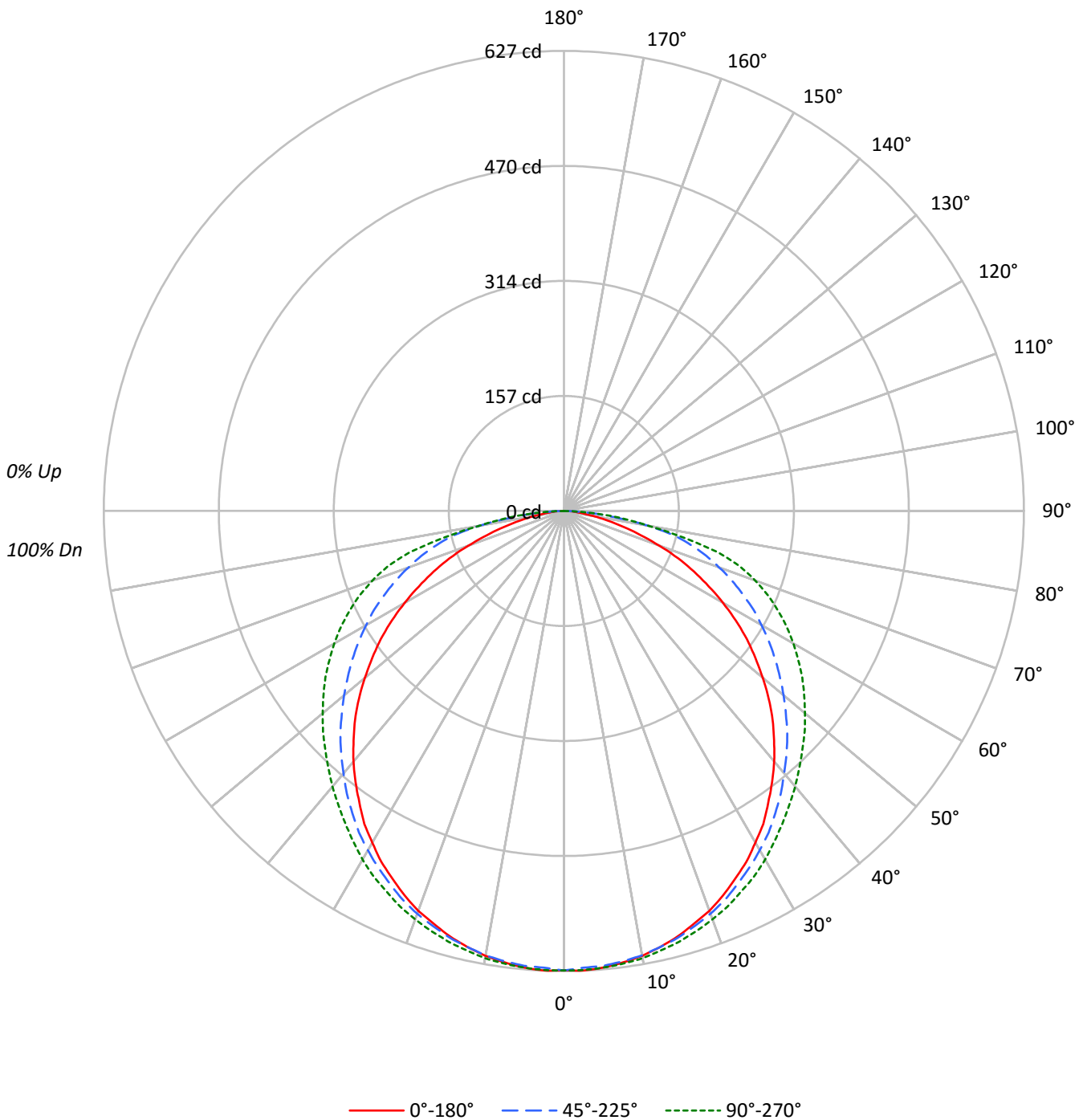
Input Watts (W): 23.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	50	30	10	0	
RCR																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				100
1	108	103	98	94	105	101	96	93	96	93	90	92	90	87	89	86	84	82				82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67				67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	59	68	63	58	56				56
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	50	48				48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41				41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36				36
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31				31
8	59	45	36	30	57	44	36	30	43	36	30	42	35	30	41	34	30	28				28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25				25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	24	35	29	24	23				23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	843	843	843
5°	844	840	844
10°	841	840	846
15°	836	839	846
20°	831	836	848
25°	821	832	849
30°	811	830	852
35°	798	826	853
40°	783	820	861
45°	766	820	875
50°	741	819	898
55°	715	825	931
60°	674	837	972
65°	622	857	1026
70°	544	887	1093
75°	441	933	1130
80°	325	914	914
85°	250	673	761



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	59.3	3.1
10°-20°	170.3	8.8
20°-30°	259.3	13.4
30°-40°	314.9	16.3
40°-50°	332.7	17.2
50°-60°	313.9	16.3
60°-70°	261.0	13.5
70°-80°	171.7	8.9
80°-90°	46.8	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°	489.0	25.3
0°-40°	803.9	41.7
0°-60°	1450.5	75.2
0°-90°	1930.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1930.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	626	626	626	626	626	
5°	625	625	622	625	625	59
15°	600	601	602	608	608	169
25°	553	556	561	570	572	255
35°	486	491	503	516	520	304
45°	402	410	431	452	460	310
55°	305	318	352	385	397	271
65°	196	218	269	309	322	193
75°	85	124	179	212	217	91
85°	16	36	44	48	49	20
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	626.2	626.2	626.2	626.2	626.2
2.5°	627.0	626.2	623.0	626.2	626.2
5°	624.6	624.6	622.2	624.6	624.6
7.5°	620.5	620.5	618.9	622.2	622.2
10°	615.7	615.7	614.9	618.9	618.9
12.5°	608.4	609.2	608.4	613.3	613.3
15°	600.3	601.1	602.0	607.6	607.6
17.5°	589.8	591.4	593.1	599.5	600.3
20°	580.1	580.9	584.2	591.4	592.3
22.5°	567.2	569.6	573.7	580.9	583.4
25°	552.7	555.9	560.7	570.4	572.1
27.5°	538.9	541.4	547.8	558.3	561.6
30°	522.0	526.0	534.1	544.6	548.6
32.5°	505.8	509.8	519.5	530.8	534.1
35°	485.6	491.3	502.6	515.5	519.5
37.5°	466.2	471.9	485.6	500.1	505.0
40°	446.0	452.5	467.0	484.0	490.4
42.5°	424.2	433.1	449.2	467.8	475.1
45°	402.4	410.5	430.7	451.7	459.7
47.5°	378.9	388.6	410.5	435.5	445.2
50°	353.9	366.0	391.1	418.5	429.0
52.5°	328.9	342.6	370.9	401.6	412.9
55°	304.6	317.5	351.5	384.6	396.7
57.5°	277.9	294.1	331.3	366.8	378.9
60°	250.5	268.3	311.1	348.2	361.2
62.5°	223.0	243.2	291.7	328.9	342.6
65°	195.5	218.2	269.1	308.7	322.4
67.5°	168.9	193.9	248.1	287.6	301.4
70°	138.2	169.7	225.4	264.2	277.9
72.5°	109.9	146.2	203.6	240.0	252.1
75°	84.8	123.6	179.4	212.5	217.3
77.5°	62.2	101.0	154.3	165.6	166.4
80°	42.0	80.8	118.0	116.4	118.0
82.5°	27.5	60.6	74.3	83.2	84.0
85°	16.2	35.6	43.6	48.5	49.3
87.5°	8.1	12.1	15.4	16.2	17.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)