

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: P309227

Luminaire Tested: **24FCZ2-30-UNV-L82765-HRP-CP250-W2A-U-5500K**

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: P309227
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-CP250-W2A-U-5500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.250"
POLYCARB SHEET
Light Source: (168) 5500K 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: 2030.0 lumens
Efficiency: N/A
Efficacy: 84.2 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

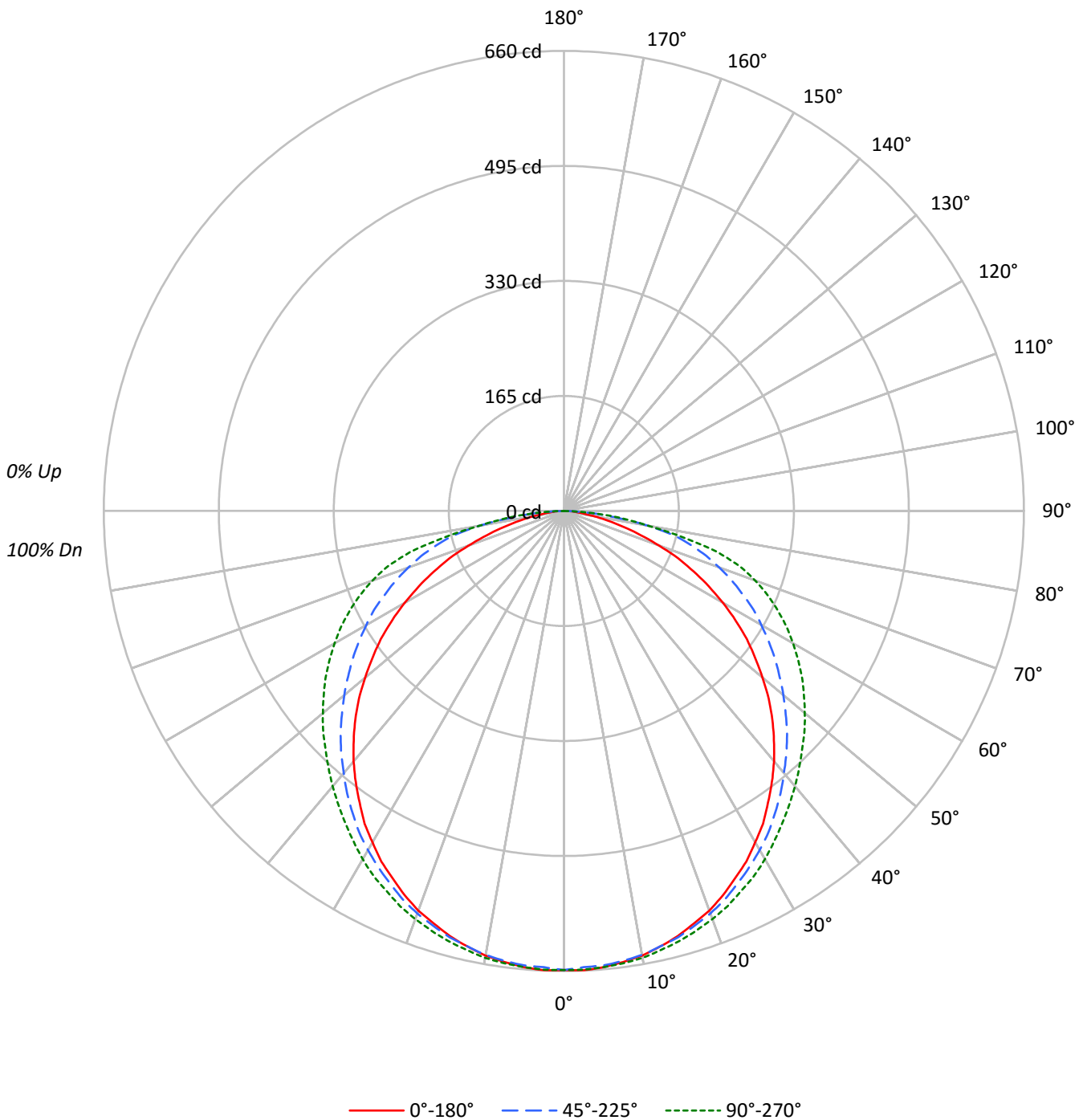
Input Watts (W): 24.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	886	886	886
5°	887	884	887
10°	885	884	889
15°	880	882	890
20°	874	880	892
25°	863	876	893
30°	853	873	896
35°	839	868	898
40°	824	863	906
45°	805	862	920
50°	779	861	945
55°	752	867	979
60°	709	880	1022
65°	655	901	1080
70°	572	933	1150
75°	464	981	1188
80°	342	962	962
85°	262	709	800



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	62.4	3.1
10°-20°	179.2	8.8
20°-30°	272.8	13.4
30°-40°	331.2	16.3
40°-50°	349.9	17.2
50°-60°	330.2	16.3
60°-70°	274.5	13.5
70°-80°	180.6	8.9
80°-90°	49.2	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°	514.3	25.3
0°-40°	845.5	41.7
0°-60°	1525.6	75.2
0°-90°	2030.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2030.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	659	659	659	659	659	
5°	657	657	654	657	657	62
15°	631	632	633	639	639	178
25°	581	585	590	600	602	268
35°	511	517	529	542	546	320
45°	423	432	453	475	484	326
55°	320	334	370	404	417	285
65°	206	230	283	325	339	203
75°	89	130	189	224	229	96
85°	17	37	46	51	52	21
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	658.6	658.6	658.6	658.6	658.6
2.5°	659.5	658.6	655.2	658.6	658.6
5°	656.9	656.9	654.4	656.9	656.9
7.5°	652.7	652.7	651.0	654.4	654.4
10°	647.6	647.6	646.7	651.0	651.0
12.5°	639.9	640.8	639.9	645.0	645.0
15°	631.4	632.3	633.1	639.1	639.1
17.5°	620.4	622.1	623.8	630.6	631.4
20°	610.2	611.0	614.4	622.1	622.9
22.5°	596.6	599.1	603.4	611.0	613.6
25°	581.3	584.7	589.8	600.0	601.7
27.5°	566.9	569.4	576.2	587.2	590.6
30°	549.0	553.3	561.8	572.8	577.0
32.5°	532.0	536.3	546.5	558.4	561.8
35°	510.8	516.7	528.6	542.2	546.5
37.5°	490.4	496.3	510.8	526.1	531.2
40°	469.1	475.9	491.2	509.1	515.9
42.5°	446.2	455.5	472.5	492.1	499.7
45°	423.2	431.7	453.0	475.1	483.6
47.5°	398.6	408.8	431.7	458.1	468.3
50°	372.2	385.0	411.3	440.2	451.3
52.5°	345.9	360.3	390.1	422.4	434.3
55°	320.4	334.0	369.7	404.5	417.3
57.5°	292.3	309.3	348.4	385.8	398.6
60°	263.5	282.2	327.2	366.3	379.9
62.5°	234.6	255.8	306.8	345.9	360.3
65°	205.7	229.5	283.0	324.6	339.1
67.5°	177.6	204.0	260.9	302.5	317.0
70°	145.3	178.5	237.1	277.9	292.3
72.5°	115.6	153.8	214.2	252.4	265.2
75°	89.2	130.0	188.7	223.5	228.6
77.5°	65.4	106.2	162.3	174.2	175.1
80°	44.2	85.0	124.1	122.4	124.1
82.5°	28.9	63.7	78.2	87.5	88.4
85°	17.0	37.4	45.9	51.0	51.8
87.5°	8.5	12.7	16.1	17.0	18.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)