

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: P313040

Luminaire Tested: **24FCZ2-30HE-UNV-L83050-HRP-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: P313040
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: 24FCZ2-30HE-UNV-L83050-HRP-CA08-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 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: 2060.0 lumens
Efficiency: N/A
Efficacy: 97.6 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

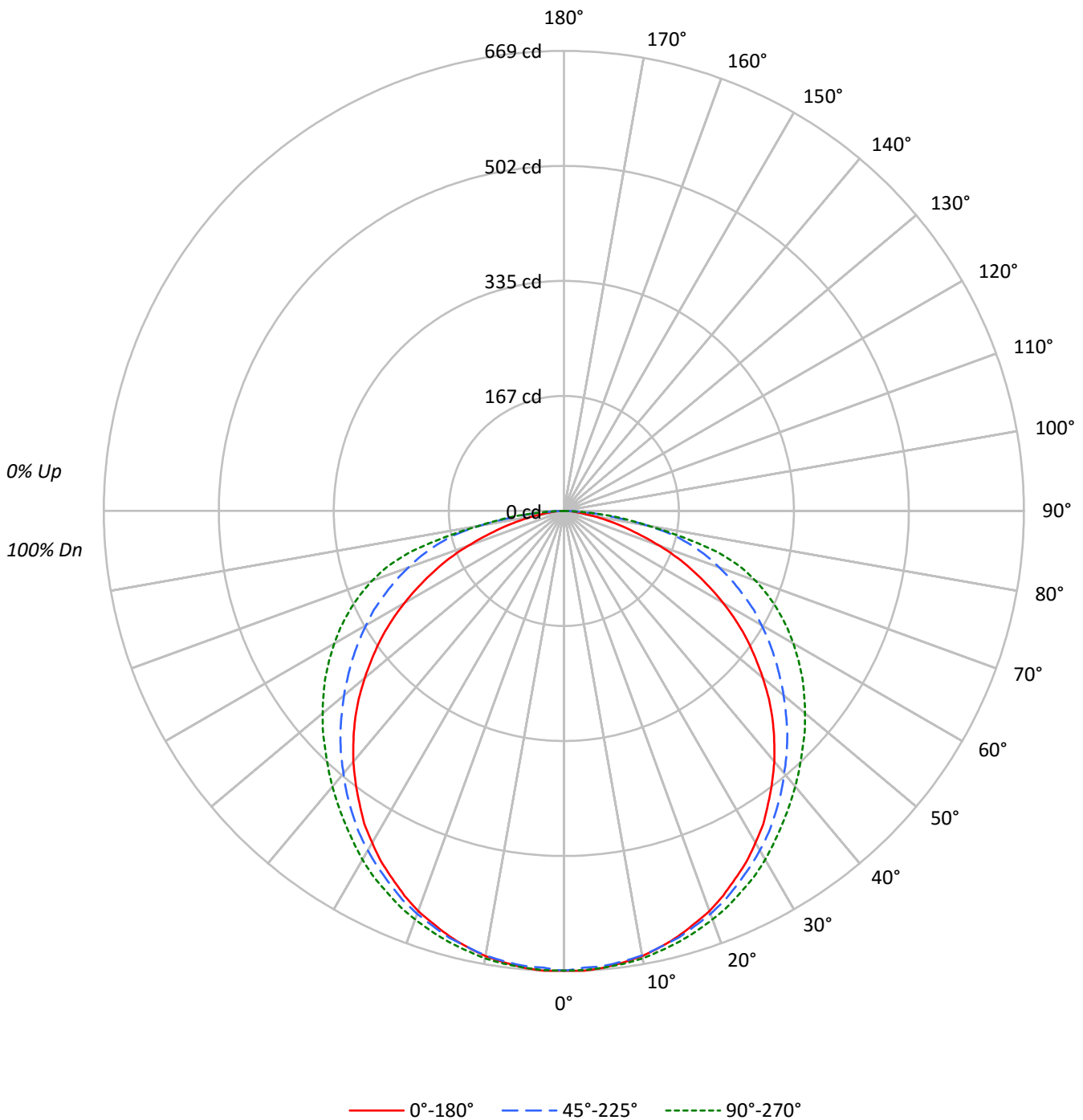
Input Watts (W): 21.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	899	899	899
5°	900	897	900
10°	898	897	903
15°	893	895	903
20°	887	893	905
25°	876	889	906
30°	866	886	910
35°	851	881	911
40°	836	876	919
45°	817	875	934
50°	791	874	958
55°	763	880	993
60°	719	893	1037
65°	664	914	1096
70°	580	947	1167
75°	471	996	1206
80°	347	976	976
85°	266	719	812



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	63.3	3.1
10°-20°	181.8	8.8
20°-30°	276.8	13.4
30°-40°	336.1	16.3
40°-50°	355.1	17.2
50°-60°	335.0	16.3
60°-70°	278.6	13.5
70°-80°	183.3	8.9
80°-90°	49.9	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°	521.9	25.3
0°-40°	858.0	41.7
0°-60°	1548.2	75.2
0°-90°	2060.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2060.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	668	668	668	668	668	
5°	667	667	664	667	667	63
15°	641	642	642	648	648	181
25°	590	593	598	609	611	272
35°	518	524	536	550	554	324
45°	430	438	460	482	491	331
55°	325	339	375	410	423	290
65°	209	233	287	329	344	206
75°	91	132	192	227	232	98
85°	17	38	47	52	53	21
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	668.4	668.4	668.4	668.4	668.4
2.5°	669.2	668.4	664.9	668.4	668.4
5°	666.6	666.6	664.1	666.6	666.6
7.5°	662.3	662.3	660.6	664.1	664.1
10°	657.2	657.2	656.3	660.6	660.6
12.5°	649.4	650.3	649.4	654.6	654.6
15°	640.8	641.6	642.5	648.5	648.5
17.5°	629.6	631.3	633.0	639.9	640.8
20°	619.2	620.1	623.5	631.3	632.1
22.5°	605.4	608.0	612.3	620.1	622.7
25°	589.9	593.3	598.5	608.9	610.6
27.5°	575.2	577.8	584.7	595.9	599.4
30°	557.1	561.4	570.1	581.3	585.6
32.5°	539.9	544.2	554.5	566.6	570.1
35°	518.3	524.3	536.4	550.2	554.5
37.5°	497.6	503.6	518.3	533.8	539.0
40°	476.1	483.0	498.5	516.6	523.5
42.5°	452.8	462.3	479.5	499.3	507.1
45°	429.5	438.1	459.7	482.1	490.7
47.5°	404.5	414.8	438.1	464.8	475.2
50°	377.7	390.7	417.4	446.7	457.9
52.5°	351.0	365.7	395.8	428.6	440.7
55°	325.1	338.9	375.1	410.5	423.4
57.5°	296.7	313.9	353.6	391.5	404.5
60°	267.3	286.3	332.0	371.7	385.5
62.5°	238.0	259.6	311.3	351.0	365.7
65°	208.7	232.9	287.2	329.4	344.1
67.5°	180.2	207.0	264.8	307.0	321.7
70°	147.5	181.1	240.6	282.0	296.7
72.5°	117.3	156.1	217.3	256.1	269.1
75°	90.6	131.9	191.5	226.8	232.0
77.5°	66.4	107.8	164.7	176.8	177.7
80°	44.8	86.2	125.9	124.2	125.9
82.5°	29.3	64.7	79.3	88.8	89.7
85°	17.2	37.9	46.6	51.7	52.6
87.5°	8.6	12.9	16.4	17.2	19.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)