

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: P313417

Luminaire Tested: **24FCZ2-30HE-UNV-L83050-RDP-CA08-W2A-U-4000K**

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: P313417
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-4000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.08" ACRYLIC SHEET
Light Source: (336) 4000K 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: 1982.0 lumens
Efficiency: N/A
Efficacy: 91.8 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

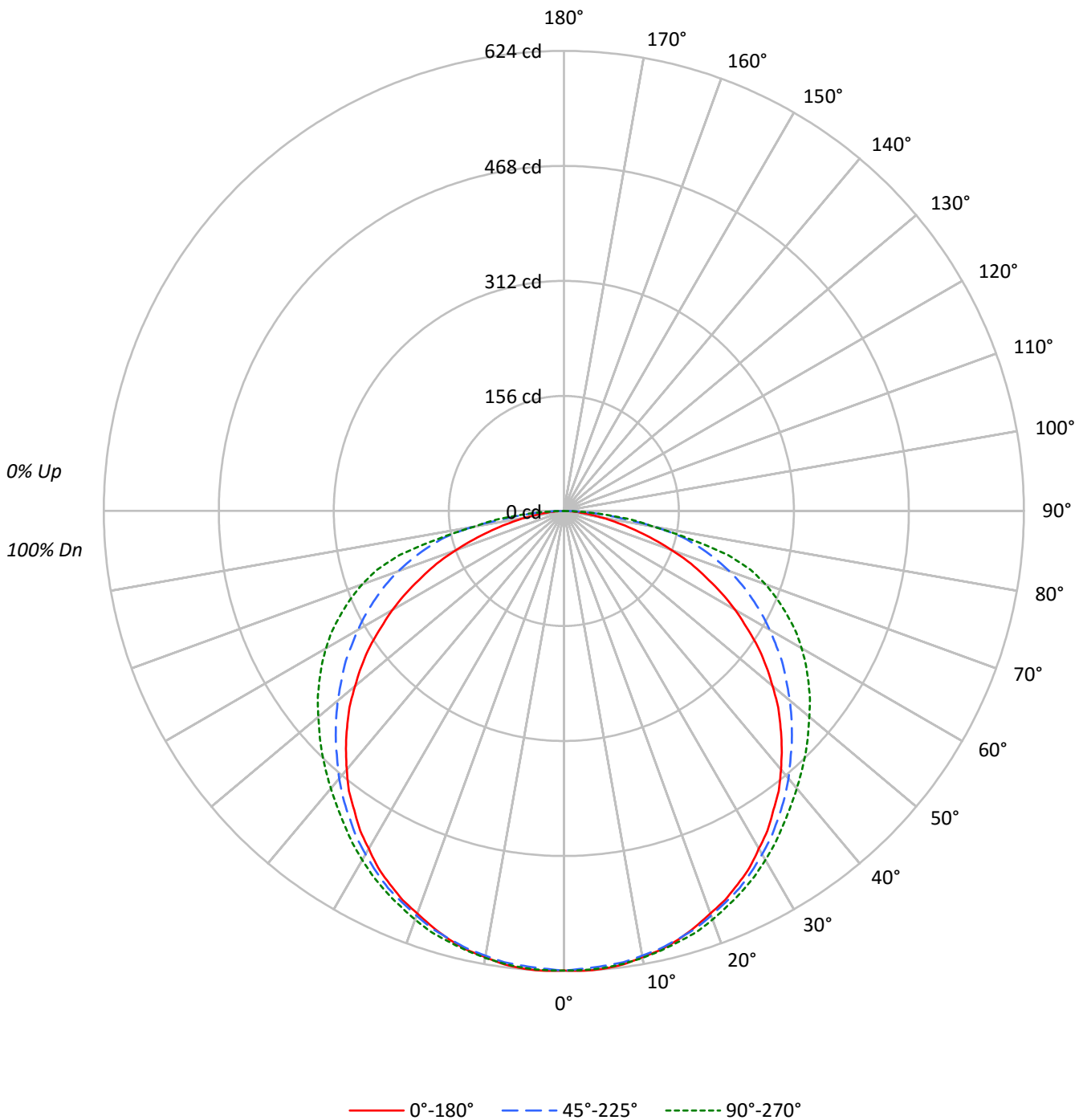
Input Watts (W): 21.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	839	839	839
5°	842	837	840
10°	839	837	841
15°	838	837	842
20°	832	836	845
25°	829	838	847
30°	822	836	849
35°	814	833	853
40°	805	832	863
45°	791	832	883
50°	774	837	909
55°	754	851	950
60°	722	868	1003
65°	676	898	1064
70°	615	940	1145
75°	521	991	1196
80°	411	998	968
85°	304	760	851



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	59.1	3.0
10°-20°	170.2	8.6
20°-30°	260.2	13.1
30°-40°	318.1	16.0
40°-50°	339.0	17.1
50°-60°	324.2	16.4
60°-70°	274.6	13.9
70°-80°	184.6	9.3
80°-90°	52.1	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°	489.5	24.7
0°-40°	807.6	40.7
0°-60°	1470.8	74.2
0°-90°	1982.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1982.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	623	623	623	623	623	
5°	623	622	619	622	622	59
15°	602	602	601	606	605	170
25°	558	560	564	569	570	257
35°	496	499	507	517	519	310
45°	416	423	438	456	464	321
55°	322	333	363	391	405	286
65°	212	234	282	320	334	211
75°	100	137	191	223	230	107
85°	20	40	49	53	55	24
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	623.3	623.3	623.3	623.3	623.3
2.5°	624.3	624.3	621.3	623.3	623.3
5°	623.3	622.3	619.4	622.3	622.3
7.5°	620.3	619.4	617.4	620.3	619.4
10°	614.4	614.4	612.5	615.4	615.4
12.5°	609.5	608.5	607.6	611.5	610.5
15°	601.7	601.7	600.7	605.6	604.6
17.5°	591.8	592.8	593.8	597.7	598.7
20°	581.0	583.0	584.0	589.9	589.9
22.5°	571.2	572.2	574.1	580.0	580.0
25°	558.4	560.4	564.3	569.2	570.2
27.5°	545.6	546.6	551.5	558.4	559.4
30°	528.9	531.9	537.8	545.6	546.6
32.5°	514.2	517.1	524.0	531.9	533.8
35°	495.5	499.4	507.3	517.1	519.1
37.5°	478.8	481.7	491.5	502.4	505.3
40°	458.1	464.0	473.9	486.6	491.5
42.5°	437.5	443.4	455.2	471.9	477.8
45°	415.8	422.7	437.5	456.2	464.0
47.5°	394.2	402.1	418.8	440.4	449.3
50°	369.6	379.5	400.1	424.7	434.5
52.5°	346.0	357.8	380.5	408.0	420.8
55°	321.5	333.3	362.8	391.3	405.0
57.5°	293.9	309.7	342.1	374.6	389.3
60°	268.4	283.1	322.5	357.8	372.6
62.5°	240.9	260.5	302.8	340.2	354.9
65°	212.3	234.0	282.1	319.5	334.3
67.5°	186.8	210.4	261.5	298.9	313.6
70°	156.3	185.8	238.9	276.2	291.0
72.5°	127.8	160.2	215.3	251.7	265.4
75°	100.3	136.7	190.7	223.2	230.0
77.5°	74.7	113.1	165.2	178.9	174.0
80°	53.1	90.4	128.8	121.9	124.9
82.5°	34.4	68.8	79.6	90.4	93.4
85°	19.7	40.3	49.2	53.1	55.1
87.5°	8.8	14.7	19.7	19.7	18.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)