

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: P313046

Luminaire Tested: **24FCZ2-30HE-UNV-L83050-HRP-CA125-W2A-U-3500K**

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: P313046
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-CA125-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" ACRYLIC SHEET
Light Source: (336) 3500K 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: 2173.0 lumens
Efficiency: N/A
Efficacy: 103.0 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

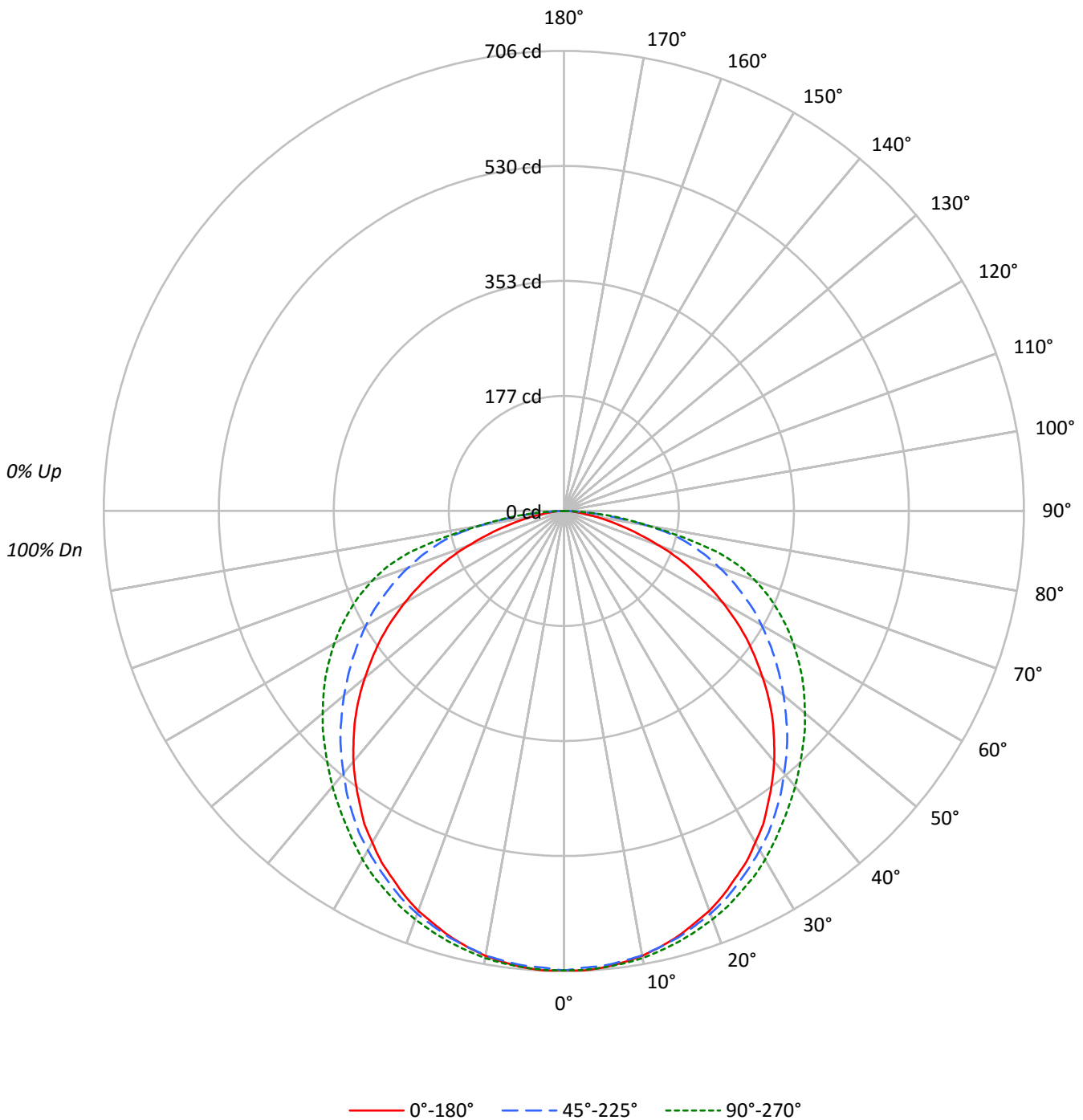
Input Watts (W): 21.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	949	949	949
5°	950	946	950
10°	947	946	952
15°	941	944	953
20°	935	942	955
25°	924	937	956
30°	913	934	960
35°	898	929	961
40°	882	924	970
45°	862	923	985
50°	834	922	1011
55°	805	928	1048
60°	759	942	1094
65°	701	964	1156
70°	612	998	1231
75°	496	1050	1272
80°	366	1029	1029
85°	281	758	857



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	66.8	3.1
10°-20°	191.8	8.8
20°-30°	292.0	13.4
30°-40°	354.5	16.3
40°-50°	374.6	17.2
50°-60°	353.4	16.3
60°-70°	293.9	13.5
70°-80°	193.3	8.9
80°-90°	52.7	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°	550.6	25.3
0°-40°	905.1	41.7
0°-60°	1633.1	75.2
0°-90°	2173.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2173.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	705	705	705	705	705	
5°	703	703	700	703	703	67
15°	676	677	678	684	684	191
25°	622	626	631	642	644	287
35°	547	553	566	580	585	342
45°	453	462	485	508	518	349
55°	343	358	396	433	447	305
65°	220	246	303	348	363	218
75°	96	139	202	239	245	103
85°	18	40	49	55	56	22
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	705.0	705.0	705.0	705.0	705.0
2.5°	705.9	705.0	701.4	705.0	705.0
5°	703.2	703.2	700.5	703.2	703.2
7.5°	698.7	698.7	696.8	700.5	700.5
10°	693.2	693.2	692.3	696.8	696.8
12.5°	685.0	685.9	685.0	690.5	690.5
15°	675.9	676.8	677.7	684.1	684.1
17.5°	664.1	665.9	667.7	675.0	675.9
20°	653.2	654.1	657.7	665.9	666.8
22.5°	638.6	641.4	645.9	654.1	656.8
25°	622.2	625.9	631.3	642.3	644.1
27.5°	606.8	609.5	616.8	628.6	632.3
30°	587.7	592.2	601.3	613.2	617.7
32.5°	569.5	574.0	584.9	597.7	601.3
35°	546.7	553.1	565.8	580.4	584.9
37.5°	524.9	531.3	546.7	563.1	568.6
40°	502.2	509.4	525.8	544.9	552.2
42.5°	477.6	487.6	505.8	526.7	534.9
45°	453.0	462.1	484.9	508.5	517.6
47.5°	426.7	437.6	462.1	490.3	501.3
50°	398.5	412.1	440.3	471.2	483.1
52.5°	370.3	385.7	417.6	452.1	464.9
55°	343.0	357.5	395.7	433.0	446.7
57.5°	312.9	331.1	373.0	413.0	426.7
60°	282.0	302.0	350.2	392.1	406.6
62.5°	251.1	273.8	328.4	370.3	385.7
65°	220.2	245.6	302.9	347.5	363.0
67.5°	190.1	218.3	279.3	323.9	339.3
70°	155.6	191.0	253.8	297.5	312.9
72.5°	123.7	164.7	229.2	270.2	283.8
75°	95.5	139.2	202.0	239.3	244.7
77.5°	70.0	113.7	173.8	186.5	187.4
80°	47.3	91.0	132.8	131.0	132.8
82.5°	30.9	68.2	83.7	93.7	94.6
85°	18.2	40.0	49.1	54.6	55.5
87.5°	9.1	13.6	17.3	18.2	20.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)