

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: P313051

Luminaire Tested: **24FCZ2-30HE-UNV-L83050-HRP-CP125-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: P313051
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-CP125-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" POLYCARB 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: 2130.0 lumens
Efficiency: N/A
Efficacy: 100.9 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

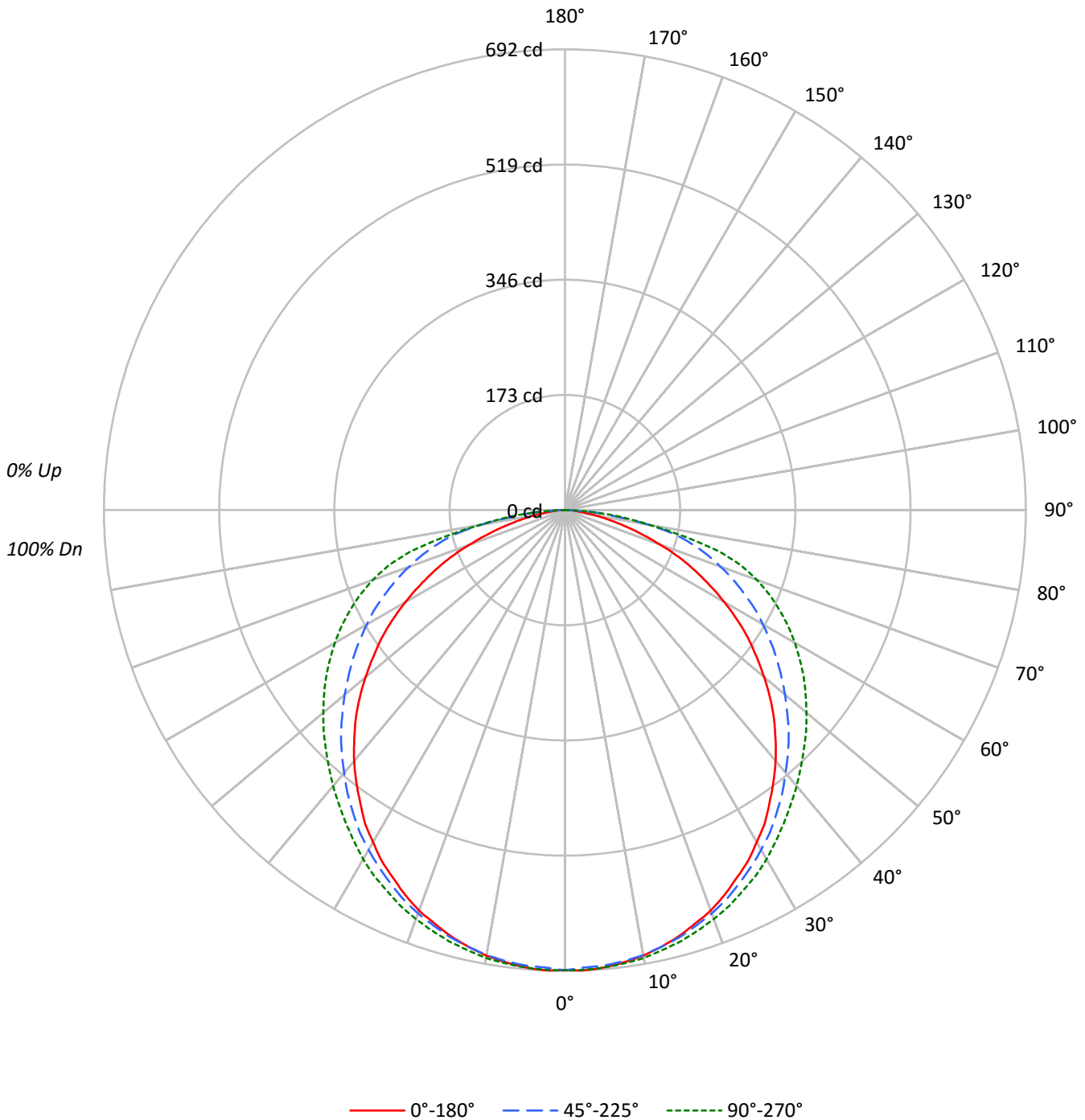
Input Watts (W): 21.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	930	930	930
5°	931	927	931
10°	928	927	933
15°	923	925	934
20°	917	923	936
25°	905	919	937
30°	895	916	941
35°	880	911	942
40°	865	905	951
45°	845	904	965
50°	818	903	991
55°	789	910	1027
60°	744	924	1073
65°	687	945	1133
70°	600	979	1207
75°	487	1029	1247
80°	360	1009	1009
85°	275	744	840



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	65.5	3.1
10°-20°	188.0	8.8
20°-30°	286.2	13.4
30°-40°	347.5	16.3
40°-50°	367.2	17.2
50°-60°	346.4	16.3
60°-70°	288.1	13.5
70°-80°	189.5	8.9
80°-90°	51.6	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°	539.7	25.3
0°-40°	887.2	41.7
0°-60°	1600.8	75.2
0°-90°	2130.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2130.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	691	691	691	691	691	
5°	689	689	687	689	689	65
15°	662	663	664	671	671	187
25°	610	614	619	630	631	281
35°	536	542	555	569	573	335
45°	444	453	475	498	507	342
55°	336	350	388	424	438	299
65°	216	241	297	341	356	213
75°	94	136	198	234	240	101
85°	18	39	48	54	54	22
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	691.1	691.1	691.1	691.1	691.1
2.5°	692.0	691.1	687.5	691.1	691.1
5°	689.3	689.3	686.6	689.3	689.3
7.5°	684.8	684.8	683.1	686.6	686.6
10°	679.5	679.5	678.6	683.1	683.1
12.5°	671.5	672.4	671.5	676.8	676.8
15°	662.5	663.4	664.3	670.6	670.6
17.5°	651.0	652.7	654.5	661.7	662.5
20°	640.3	641.1	644.7	652.7	653.6
22.5°	626.0	628.7	633.1	641.1	643.8
25°	609.9	613.5	618.9	629.6	631.3
27.5°	594.8	597.4	604.6	616.2	619.7
30°	576.0	580.5	589.4	601.0	605.5
32.5°	558.2	562.7	573.4	585.9	589.4
35°	535.9	542.2	554.6	568.9	573.4
37.5°	514.5	520.8	535.9	552.0	557.3
40°	492.2	499.4	515.4	534.1	541.3
42.5°	468.2	478.0	495.8	516.3	524.3
45°	444.1	453.0	475.3	498.5	507.4
47.5°	418.2	428.9	453.0	480.6	491.3
50°	390.6	403.9	431.6	461.9	473.5
52.5°	362.9	378.1	409.3	443.2	455.7
55°	336.2	350.4	387.9	424.5	437.8
57.5°	306.8	324.6	365.6	404.8	418.2
60°	276.4	296.0	343.3	384.3	398.6
62.5°	246.1	268.4	321.9	362.9	378.1
65°	215.8	240.8	296.9	340.6	355.8
67.5°	186.4	214.0	273.8	317.5	332.6
70°	152.5	187.3	248.8	291.6	306.8
72.5°	121.3	161.4	224.7	264.8	278.2
75°	93.6	136.4	198.0	234.5	239.9
77.5°	68.7	111.5	170.3	182.8	183.7
80°	46.4	89.2	130.2	128.4	130.2
82.5°	30.3	66.9	82.0	91.8	92.7
85°	17.8	39.2	48.2	53.5	54.4
87.5°	8.9	13.4	16.9	17.8	19.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)