

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: P309198

Luminaire Tested: **24FCZ2-30-UNV-L82765-HRP-CA125-W2A-U-4500K**

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: P309198  
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-CA125-W2A-U-4500K  
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" ACRYLIC SHEET  
Light Source: (168) 4500K 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: 2129.0 lumens  
Efficiency: N/A  
Efficacy: 89.5 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

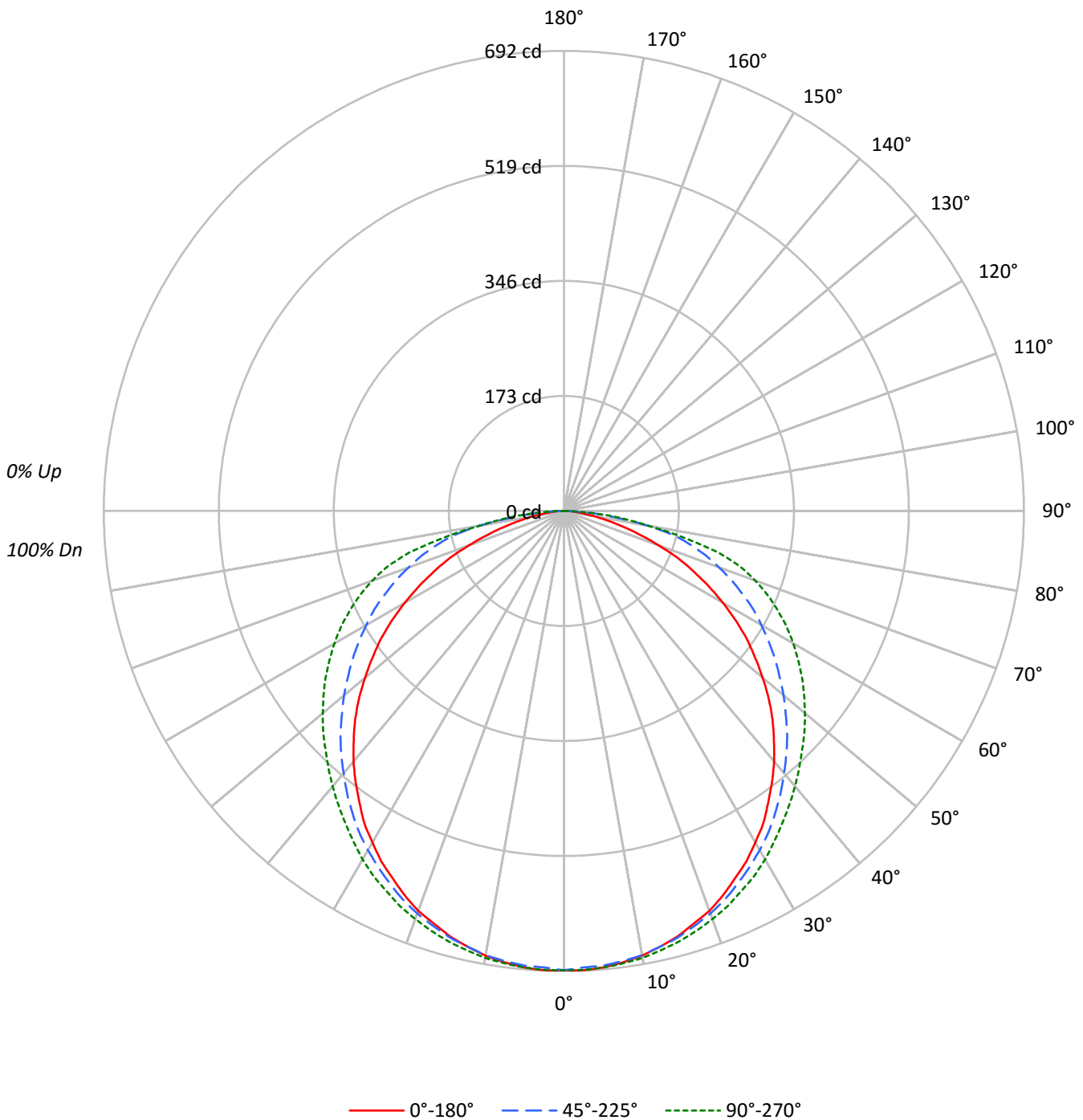
Input Watts (W): 23.8  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	929	929	929
5°	931	927	931
10°	928	927	933
15°	922	925	934
20°	916	923	935
25°	905	918	937
30°	895	915	940
35°	880	911	941
40°	864	905	950
45°	845	904	965
50°	817	903	991
55°	788	909	1027
60°	744	923	1072
65°	687	945	1132
70°	600	978	1206
75°	487	1029	1247
80°	359	1008	1008
85°	275	743	840



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	65.4	3.1
10°-20°	187.9	8.8
20°-30°	286.1	13.4
30°-40°	347.4	16.3
40°-50°	367.0	17.2
50°-60°	346.3	16.3
60°-70°	287.9	13.5
70°-80°	189.4	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°	539.4	25.3
0°-40°	886.8	41.7
0°-60°	1600.0	75.2
0°-90°	2129.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2129.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	691	691	691	691	691	
5°	689	689	686	689	689	65
15°	662	663	664	670	670	187
25°	610	613	619	629	631	281
35°	536	542	554	569	573	335
45°	444	453	475	498	507	342
55°	336	350	388	424	438	299
65°	216	241	297	340	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°	690.8	690.8	690.8	690.8	690.8
2.5°	691.6	690.8	687.2	690.8	690.8
5°	689.0	689.0	686.3	689.0	689.0
7.5°	684.5	684.5	682.7	686.3	686.3
10°	679.2	679.2	678.3	682.7	682.7
12.5°	671.1	672.0	671.1	676.5	676.5
15°	662.2	663.1	664.0	670.3	670.3
17.5°	650.6	652.4	654.2	661.3	662.2
20°	640.0	640.8	644.4	652.4	653.3
22.5°	625.7	628.4	632.8	640.8	643.5
25°	609.6	613.2	618.6	629.3	631.0
27.5°	594.5	597.2	604.3	615.9	619.5
30°	575.8	580.2	589.1	600.7	605.2
32.5°	558.0	562.4	573.1	585.6	589.1
35°	535.7	541.9	554.4	568.6	573.1
37.5°	514.3	520.5	535.7	551.7	557.1
40°	492.0	499.1	515.2	533.9	541.0
42.5°	467.9	477.7	495.6	516.1	524.1
45°	443.9	452.8	475.1	498.2	507.1
47.5°	418.0	428.7	452.8	480.4	491.1
50°	390.4	403.8	431.4	461.7	473.3
52.5°	362.8	377.9	409.1	443.0	455.5
55°	336.0	350.3	387.7	424.3	437.6
57.5°	306.6	324.4	365.4	404.6	418.0
60°	276.3	295.9	343.1	384.1	398.4
62.5°	246.0	268.3	321.8	362.8	377.9
65°	215.7	240.7	296.8	340.5	355.6
67.5°	186.3	213.9	273.6	317.3	332.5
70°	152.4	187.2	248.7	291.5	306.6
72.5°	121.2	161.3	224.6	264.7	278.1
75°	93.6	136.4	197.9	234.4	239.8
77.5°	68.6	111.4	170.2	182.7	183.6
80°	46.3	89.1	130.1	128.3	130.1
82.5°	30.3	66.8	82.0	91.8	92.7
85°	17.8	39.2	48.1	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)