

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: P313062

Luminaire Tested: **24FCZ2-30HE-UNV-L83050-HRP-CP250-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: P313062
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-CP250-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.250"
POLYCARB 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: 2125.0 lumens
Efficiency: N/A
Efficacy: 98.4 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

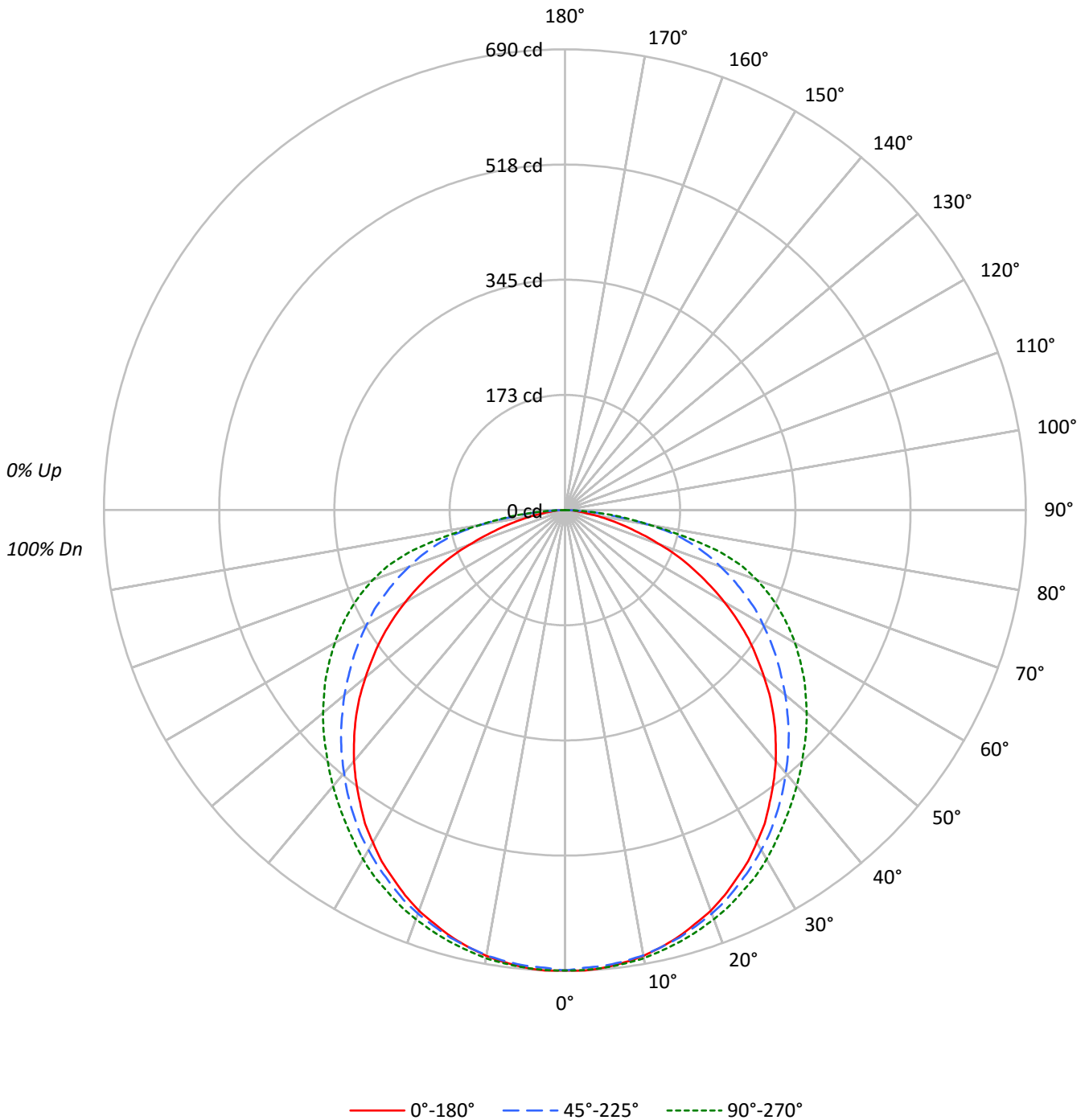
Input Watts (W): 21.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	928	928	928
5°	929	925	929
10°	926	925	931
15°	921	923	932
20°	915	921	934
25°	903	917	935
30°	893	914	939
35°	878	909	940
40°	863	903	948
45°	843	902	963
50°	816	901	989
55°	787	908	1025
60°	742	922	1070
65°	685	943	1130
70°	598	976	1204
75°	486	1027	1244
80°	359	1007	1007
85°	275	741	838



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	65.3	3.1
10°-20°	187.6	8.8
20°-30°	285.5	13.4
30°-40°	346.7	16.3
40°-50°	366.3	17.2
50°-60°	345.6	16.3
60°-70°	287.4	13.5
70°-80°	189.1	8.9
80°-90°	51.5	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°	538.4	25.3
0°-40°	885.1	41.7
0°-60°	1597.0	75.2
0°-90°	2125.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2125.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	690	690	690	690	690	
5°	688	688	685	688	688	65
15°	661	662	663	669	669	186
25°	608	612	617	628	630	281
35°	535	541	553	568	572	335
45°	443	452	474	497	506	341
55°	335	350	387	424	437	299
65°	215	240	296	340	355	213
75°	93	136	198	234	239	101
85°	18	39	48	53	54	22
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	689.5	689.5	689.5	689.5	689.5
2.5°	690.3	689.5	685.9	689.5	689.5
5°	687.7	687.7	685.0	687.7	687.7
7.5°	683.2	683.2	681.5	685.0	685.0
10°	677.9	677.9	677.0	681.5	681.5
12.5°	669.9	670.8	669.9	675.2	675.2
15°	661.0	661.9	662.8	669.0	669.0
17.5°	649.4	651.2	653.0	660.1	661.0
20°	638.7	639.6	643.2	651.2	652.1
22.5°	624.5	627.2	631.6	639.6	642.3
25°	608.5	612.1	617.4	628.1	629.9
27.5°	593.4	596.0	603.2	614.7	618.3
30°	574.7	579.1	588.0	599.6	604.1
32.5°	556.9	561.4	572.0	584.5	588.0
35°	534.7	540.9	553.3	567.6	572.0
37.5°	513.3	519.5	534.7	550.7	556.0
40°	491.1	498.2	514.2	532.9	540.0
42.5°	467.1	476.8	494.6	515.1	523.1
45°	443.0	451.9	474.2	497.3	506.2
47.5°	417.2	427.9	451.9	479.5	490.2
50°	389.7	403.0	430.6	460.8	472.4
52.5°	362.1	377.2	408.3	442.1	454.6
55°	335.4	349.6	387.0	423.5	436.8
57.5°	306.0	323.8	364.7	403.9	417.2
60°	275.8	295.4	342.5	383.4	397.7
62.5°	245.5	267.8	321.2	362.1	377.2
65°	215.3	240.2	296.2	339.8	355.0
67.5°	185.9	213.5	273.1	316.7	331.8
70°	152.1	186.8	248.2	290.9	306.0
72.5°	121.0	161.0	224.2	264.2	277.6
75°	93.4	136.1	197.5	234.0	239.3
77.5°	68.5	111.2	169.9	182.4	183.3
80°	46.3	89.0	129.9	128.1	129.9
82.5°	30.2	66.7	81.8	91.6	92.5
85°	17.8	39.1	48.0	53.4	54.3
87.5°	8.9	13.3	16.9	17.8	19.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)