

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: P313060

Luminaire Tested: **24FCZ2-30HE-UNV-L83050-HRP-CP250-W2A-U-3000K**

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: P313060
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-3000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.250"
POLYCARB SHEET
Light Source: (336) 3000K 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: 1912.0 lumens
Efficiency: N/A
Efficacy: 90.6 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

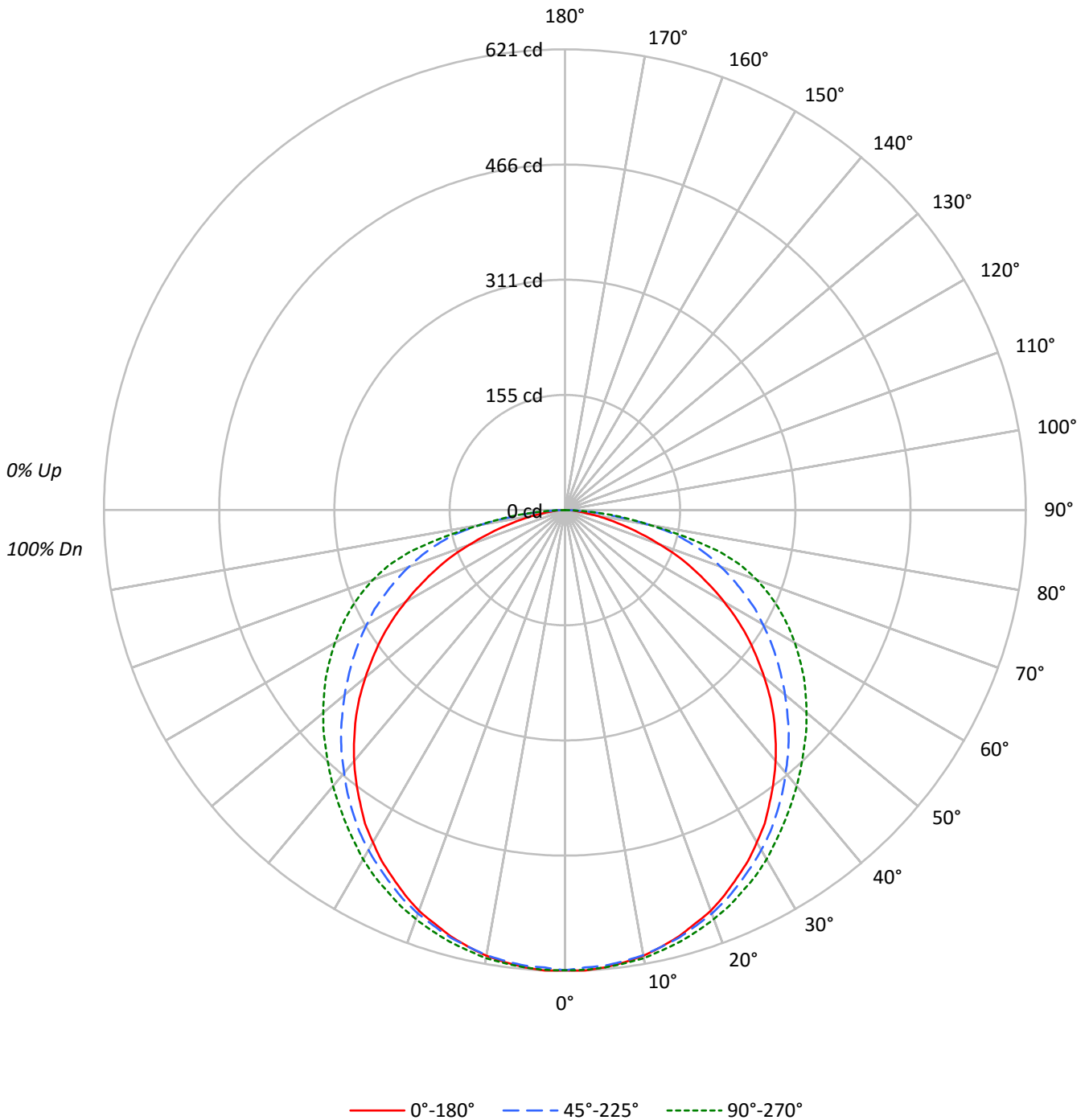
Input Watts (W): 21.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	835	835	835
5°	836	832	836
10°	833	832	838
15°	828	831	838
20°	823	829	840
25°	813	825	841
30°	803	822	844
35°	790	818	845
40°	776	813	853
45°	758	812	867
50°	734	811	890
55°	708	817	922
60°	668	829	963
65°	617	849	1017
70°	539	878	1083
75°	437	924	1119
80°	322	906	906
85°	247	667	753



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	58.8	3.1
10°-20°	168.7	8.8
20°-30°	256.9	13.4
30°-40°	312.0	16.3
40°-50°	329.6	17.2
50°-60°	311.0	16.3
60°-70°	258.6	13.5
70°-80°	170.1	8.9
80°-90°	46.4	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°	484.4	25.3
0°-40°	796.4	41.7
0°-60°	1436.9	75.2
0°-90°	1912.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1912.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	620	620	620	620	620	
5°	619	619	616	619	619	59
15°	595	596	596	602	602	168
25°	548	551	556	565	567	253
35°	481	487	498	511	515	301
45°	399	407	427	448	456	307
55°	302	315	348	381	393	269
65°	194	216	267	306	319	191
75°	84	122	178	210	215	91
85°	16	35	43	48	49	20
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	620.3	620.3	620.3	620.3	620.3
2.5°	621.2	620.3	617.1	620.3	620.3
5°	618.7	618.7	616.3	618.7	618.7
7.5°	614.7	614.7	613.1	616.3	616.3
10°	609.9	609.9	609.1	613.1	613.1
12.5°	602.7	603.5	602.7	607.5	607.5
15°	594.7	595.5	596.3	601.9	601.9
17.5°	584.3	585.9	587.5	593.9	594.7
20°	574.7	575.5	578.7	585.9	586.7
22.5°	561.9	564.3	568.3	575.5	577.9
25°	547.5	550.7	555.5	565.1	566.7
27.5°	533.9	536.3	542.7	553.1	556.3
30°	517.1	521.1	529.1	539.5	543.5
32.5°	501.1	505.1	514.7	525.9	529.1
35°	481.1	486.7	497.9	510.7	514.7
37.5°	461.9	467.5	481.1	495.5	500.3
40°	441.8	448.3	462.7	479.5	485.9
42.5°	420.2	429.0	445.1	463.5	470.7
45°	398.6	406.6	426.6	447.5	455.5
47.5°	375.4	385.0	406.6	431.4	441.0
50°	350.6	362.6	387.4	414.6	425.0
52.5°	325.8	339.4	367.4	397.8	409.0
55°	301.8	314.6	348.2	381.0	393.0
57.5°	275.4	291.4	328.2	363.4	375.4
60°	248.1	265.7	308.2	345.0	357.8
62.5°	220.9	240.9	289.0	325.8	339.4
65°	193.7	216.1	266.6	305.8	319.4
67.5°	167.3	192.1	245.7	285.0	298.6
70°	136.9	168.1	223.3	261.7	275.4
72.5°	108.9	144.9	201.7	237.7	249.7
75°	84.0	122.5	177.7	210.5	215.3
77.5°	61.6	100.1	152.9	164.1	164.9
80°	41.6	80.0	116.9	115.3	116.9
82.5°	27.2	60.0	73.6	82.4	83.2
85°	16.0	35.2	43.2	48.0	48.8
87.5°	8.0	12.0	15.2	16.0	17.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)