

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: P313052

Luminaire Tested: **24FCZ2-30HE-UNV-L83050-HRP-CP125-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: P313052
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-4000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" 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: 2237.0 lumens
Efficiency: N/A
Efficacy: 103.6 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

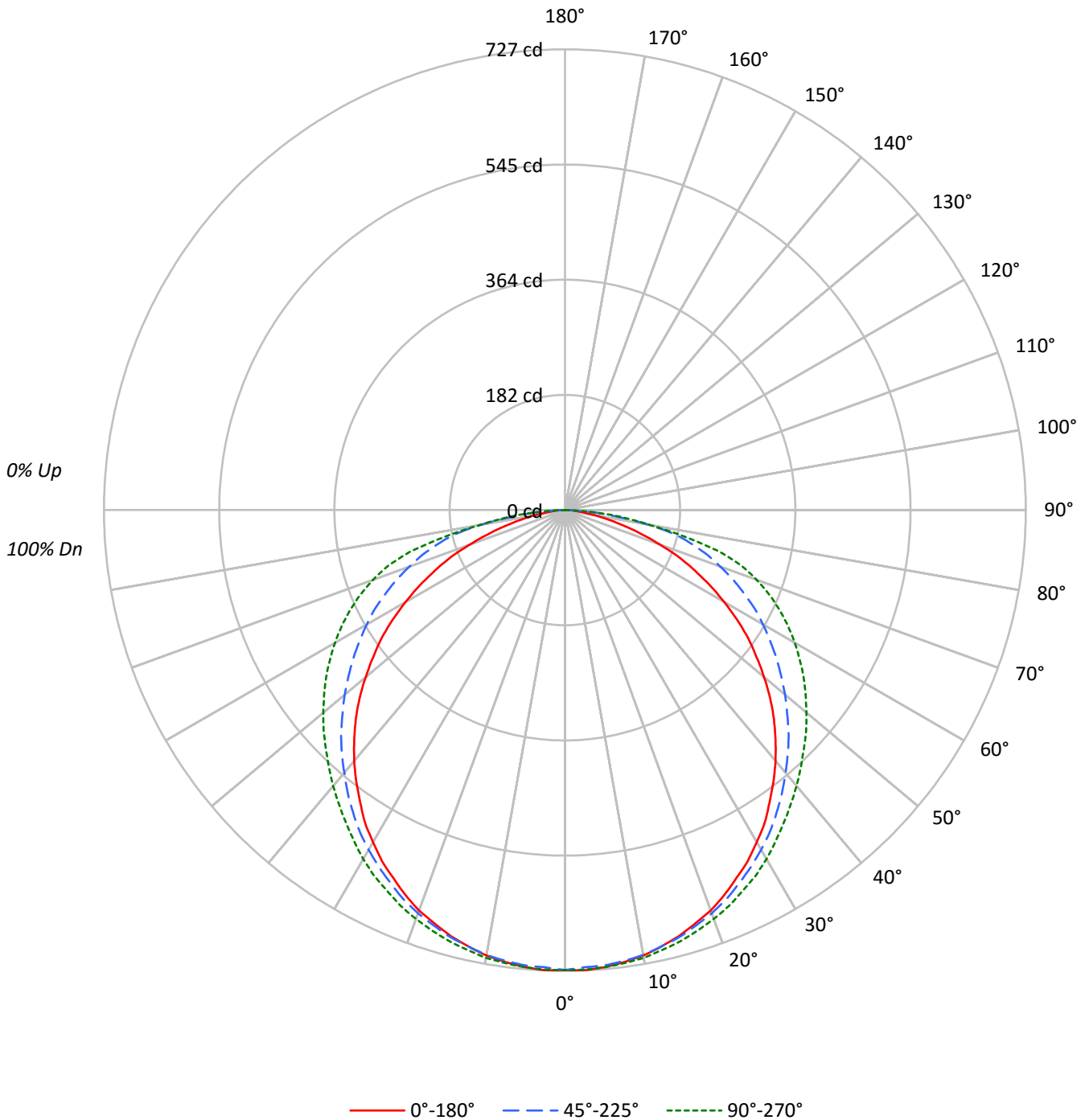
Input Watts (W): 21.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	977	977	977
5°	978	974	978
10°	975	974	980
15°	969	972	981
20°	963	969	983
25°	951	965	984
30°	940	962	988
35°	924	957	989
40°	908	951	999
45°	887	950	1014
50°	859	949	1041
55°	828	956	1079
60°	781	970	1126
65°	721	993	1190
70°	630	1028	1268
75°	511	1081	1310
80°	377	1059	1059
85°	289	781	881



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	68.8	3.1
10°-20°	197.4	8.8
20°-30°	300.6	13.4
30°-40°	365.0	16.3
40°-50°	385.6	17.2
50°-60°	363.9	16.3
60°-70°	302.5	13.5
70°-80°	199.0	8.9
80°-90°	54.3	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°	566.8	25.3
0°-40°	931.7	41.7
0°-60°	1681.2	75.2
0°-90°	2237.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2237.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	726	726	726	726	726	
5°	724	724	721	724	724	69
15°	696	697	698	704	704	196
25°	641	644	650	661	663	295
35°	563	569	582	598	602	352
45°	466	476	499	524	533	359
55°	353	368	407	446	460	314
65°	227	253	312	358	374	224
75°	98	143	208	246	252	106
85°	19	41	51	56	57	23
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	725.8	725.8	725.8	725.8	725.8
2.5°	726.7	725.8	722.1	725.8	725.8
5°	723.9	723.9	721.1	723.9	723.9
7.5°	719.2	719.2	717.4	721.1	721.1
10°	713.6	713.6	712.7	717.4	717.4
12.5°	705.2	706.1	705.2	710.8	710.8
15°	695.8	696.8	697.7	704.3	704.3
17.5°	683.7	685.5	687.4	694.9	695.8
20°	672.4	673.4	677.1	685.5	686.5
22.5°	657.4	660.2	664.9	673.4	676.2
25°	640.6	644.3	649.9	661.2	663.1
27.5°	624.7	627.5	635.0	647.1	650.9
30°	605.0	609.7	619.0	631.2	635.9
32.5°	586.3	590.9	602.2	615.3	619.0
35°	562.8	569.4	582.5	597.5	602.2
37.5°	540.4	546.9	562.8	579.7	585.3
40°	517.0	524.4	541.3	561.0	568.5
42.5°	491.7	502.0	520.7	542.2	550.7
45°	466.4	475.7	499.2	523.5	532.9
47.5°	439.2	450.5	475.7	504.8	516.0
50°	410.2	424.2	453.3	485.1	497.3
52.5°	381.2	397.1	429.9	465.4	478.6
55°	353.1	368.0	407.4	445.8	459.8
57.5°	322.2	340.9	384.0	425.2	439.2
60°	290.3	310.9	360.6	403.6	418.6
62.5°	258.5	281.9	338.1	381.2	397.1
65°	226.6	252.9	311.9	357.7	373.7
67.5°	195.7	224.8	287.5	333.4	349.3
70°	160.1	196.7	261.3	306.2	322.2
72.5°	127.4	169.5	236.0	278.1	292.2
75°	98.3	143.3	207.9	246.3	251.9
77.5°	72.1	117.1	178.9	192.0	192.9
80°	48.7	93.7	136.7	134.9	136.7
82.5°	31.8	70.2	86.2	96.5	97.4
85°	18.7	41.2	50.6	56.2	57.1
87.5°	9.4	14.0	17.8	18.7	20.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)