

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: P309160

Luminaire Tested: **24FCZ2-30HE-UNV-L82765-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: P309160
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-L82765-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: 2032.0 lumens
Efficiency: N/A
Efficacy: 95.8 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

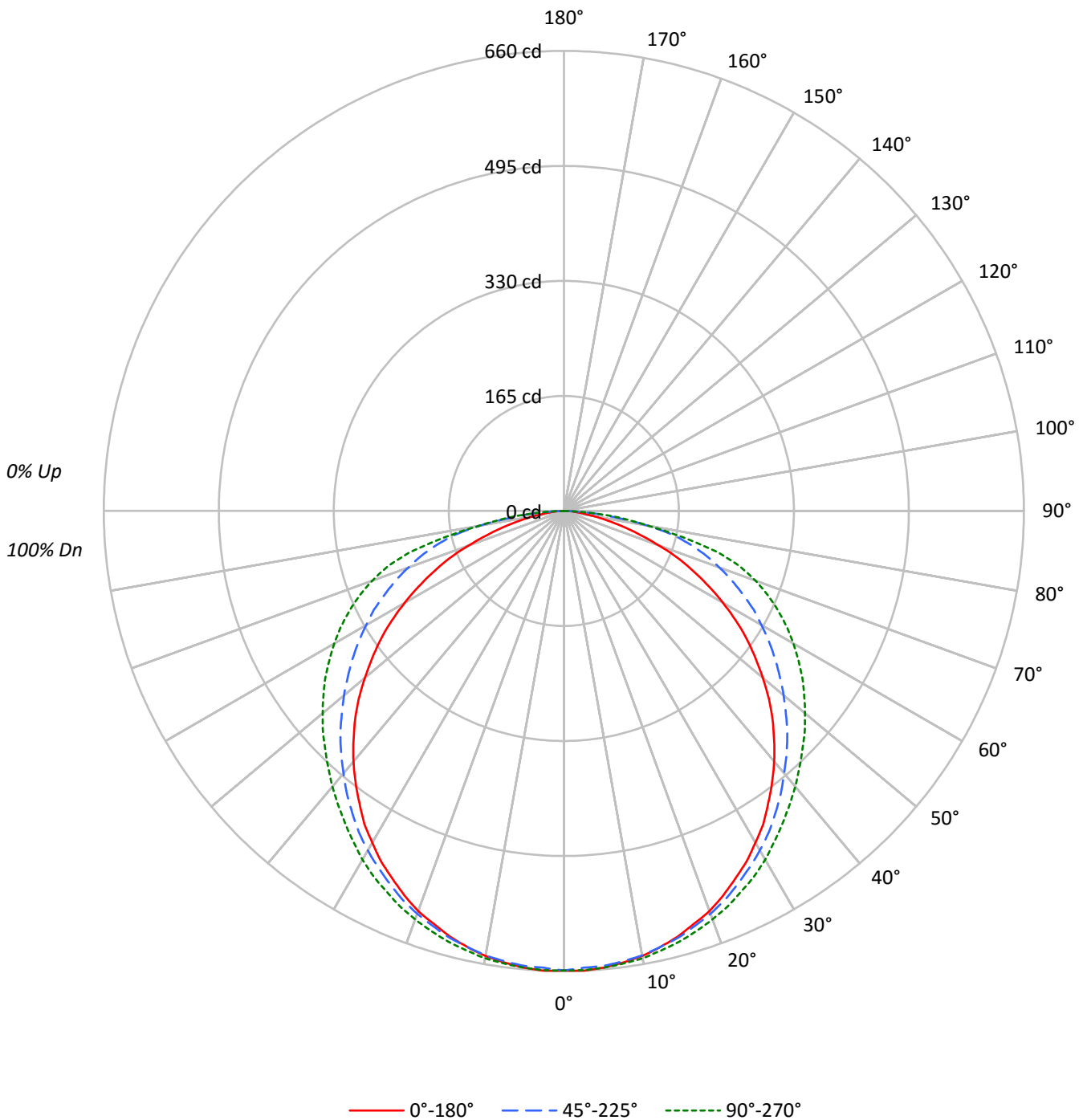
Input Watts (W): 21.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	887	887	887
5°	888	885	888
10°	886	885	890
15°	880	883	891
20°	875	881	893
25°	864	876	894
30°	854	874	897
35°	840	869	898
40°	825	864	907
45°	806	863	921
50°	780	862	946
55°	752	868	980
60°	710	881	1023
65°	656	902	1081
70°	572	934	1151
75°	464	982	1189
80°	342	962	962
85°	262	709	801



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	62.5	3.1
10°-20°	179.3	8.8
20°-30°	273.0	13.4
30°-40°	331.5	16.3
40°-50°	350.3	17.2
50°-60°	330.5	16.3
60°-70°	274.8	13.5
70°-80°	180.8	8.9
80°-90°	49.3	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°	514.8	25.3
0°-40°	846.4	41.7
0°-60°	1527.1	75.2
0°-90°	2032.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2032.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	659	659	659	659	659	
5°	658	658	655	658	658	62
15°	632	633	634	640	640	178
25°	582	585	590	601	602	268
35°	511	517	529	543	547	320
45°	424	432	453	476	484	326
55°	321	334	370	405	418	286
65°	206	230	283	325	339	204
75°	89	130	189	224	229	96
85°	17	37	46	51	52	21
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	659.3	659.3	659.3	659.3	659.3
2.5°	660.1	659.3	655.9	659.3	659.3
5°	657.6	657.6	655.0	657.6	657.6
7.5°	653.3	653.3	651.6	655.0	655.0
10°	648.2	648.2	647.4	651.6	651.6
12.5°	640.6	641.4	640.6	645.7	645.7
15°	632.1	632.9	633.8	639.7	639.7
17.5°	621.0	622.7	624.4	631.2	632.1
20°	610.8	611.6	615.0	622.7	623.6
22.5°	597.2	599.7	604.0	611.6	614.2
25°	581.9	585.3	590.4	600.6	602.3
27.5°	567.4	570.0	576.8	587.8	591.2
30°	549.5	553.8	562.3	573.4	577.6
32.5°	532.5	536.8	547.0	558.9	562.3
35°	511.3	517.2	529.1	542.7	547.0
37.5°	490.8	496.8	511.3	526.6	531.7
40°	469.6	476.4	491.7	509.6	516.4
42.5°	446.6	456.0	473.0	492.5	500.2
45°	423.6	432.2	453.4	475.5	484.0
47.5°	399.0	409.2	432.2	458.5	468.7
50°	372.6	385.4	411.7	440.7	451.7
52.5°	346.2	360.7	390.5	422.8	434.7
55°	320.7	334.3	370.0	404.9	417.7
57.5°	292.6	309.7	348.8	386.2	399.0
60°	263.7	282.4	327.5	366.6	380.3
62.5°	234.8	256.1	307.1	346.2	360.7
65°	205.9	229.7	283.3	325.0	339.4
67.5°	177.8	204.2	261.2	302.8	317.3
70°	145.5	178.6	237.3	278.2	292.6
72.5°	115.7	154.0	214.4	252.7	265.4
75°	89.3	130.2	188.9	223.7	228.8
77.5°	65.5	106.3	162.5	174.4	175.2
80°	44.2	85.1	124.2	122.5	124.2
82.5°	28.9	63.8	78.3	87.6	88.5
85°	17.0	37.4	45.9	51.0	51.9
87.5°	8.5	12.8	16.2	17.0	18.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)