

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: P309828

Luminaire Tested: **24FCZ2-30HE-UNV-L82765-RDP-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: P309828
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)
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-RDP-CA125-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" ACRYLIC SHEET
Light Source: (336) 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: 1911.0 lumens
Efficiency: N/A
Efficacy: 88.9 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

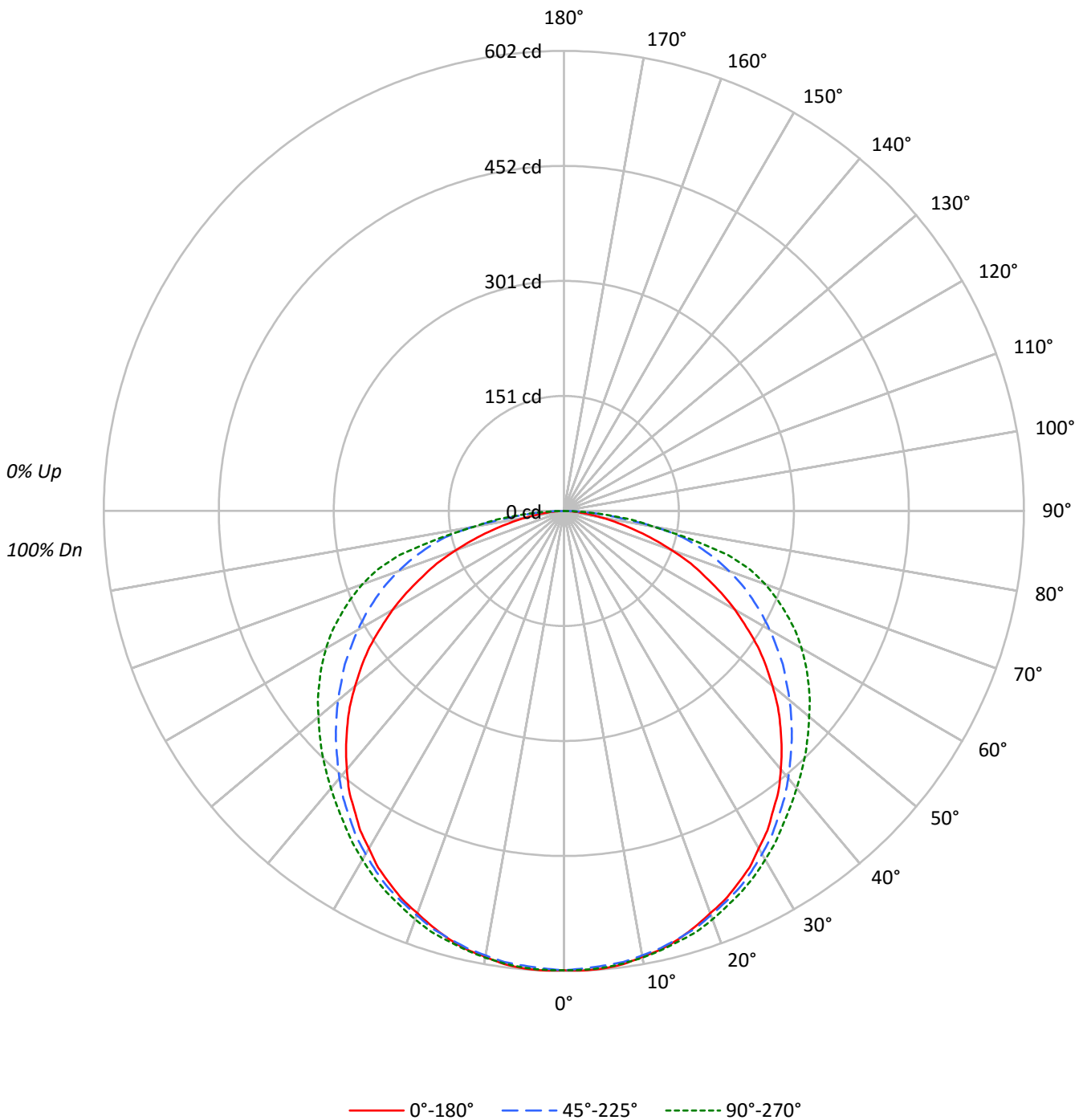
Input Watts (W): 21.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	100	96	92	96	93	89	92	89	87	88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67
3	88	77	68	62	86	76	67	61	72	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	809	809	809
5°	812	807	810
10°	809	807	811
15°	808	807	812
20°	802	806	814
25°	799	808	816
30°	792	806	819
35°	785	803	822
40°	776	803	832
45°	763	803	851
50°	746	808	877
55°	727	821	916
60°	696	837	967
65°	652	866	1026
70°	593	906	1104
75°	503	956	1153
80°	397	962	933
85°	293	732	820



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	57.0	3.0
10°-20°	164.1	8.6
20°-30°	250.9	13.1
30°-40°	306.7	16.0
40°-50°	326.9	17.1
50°-60°	312.6	16.4
60°-70°	264.8	13.9
70°-80°	177.9	9.3
80°-90°	50.2	2.6
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°	472.0	24.7
0°-40°	778.7	40.7
0°-60°	1418.1	74.2
0°-90°	1911.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1911.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	601	601	601	601	601	
5°	601	600	597	600	600	57
15°	580	580	579	584	583	164
25°	538	540	544	549	550	248
35°	478	482	489	499	500	299
45°	401	408	422	440	447	309
55°	310	321	350	377	390	276
65°	205	226	272	308	322	203
75°	97	132	184	215	222	104
85°	19	39	47	51	53	23
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	601.0	601.0	601.0	601.0	601.0
2.5°	601.9	601.9	599.1	601.0	601.0
5°	601.0	600.0	597.2	600.0	600.0
7.5°	598.1	597.2	595.3	598.1	597.2
10°	592.4	592.4	590.5	593.4	593.4
12.5°	587.7	586.7	585.8	589.6	588.6
15°	580.1	580.1	579.2	583.9	582.9
17.5°	570.6	571.6	572.5	576.3	577.3
20°	560.2	562.1	563.0	568.7	568.7
22.5°	550.7	551.7	553.6	559.2	559.2
25°	538.4	540.3	544.1	548.8	549.8
27.5°	526.1	527.0	531.8	538.4	539.3
30°	510.0	512.8	518.5	526.1	527.0
32.5°	495.7	498.6	505.2	512.8	514.7
35°	477.7	481.5	489.1	498.6	500.5
37.5°	461.6	464.5	473.9	484.4	487.2
40°	441.7	447.4	456.9	469.2	473.9
42.5°	421.8	427.5	438.9	455.0	460.7
45°	401.0	407.6	421.8	439.8	447.4
47.5°	380.1	387.7	403.8	424.6	433.2
50°	356.4	365.9	385.8	409.5	419.0
52.5°	333.7	345.0	366.8	393.4	405.7
55°	310.0	321.3	349.8	377.3	390.5
57.5°	283.4	298.6	329.9	361.1	375.4
60°	258.8	273.0	310.9	345.0	359.2
62.5°	232.2	251.2	291.9	328.0	342.2
65°	204.7	225.6	272.0	308.1	322.3
67.5°	180.1	202.8	252.1	288.2	302.4
70°	150.7	179.1	230.3	266.4	280.6
72.5°	123.2	154.5	207.6	242.7	255.9
75°	96.7	131.8	183.9	215.2	221.8
77.5°	72.0	109.0	159.2	172.5	167.8
80°	51.2	87.2	124.2	117.5	120.4
82.5°	33.2	66.4	76.8	87.2	90.0
85°	19.0	38.9	47.4	51.2	53.1
87.5°	8.5	14.2	19.0	19.0	18.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)