

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: P309840

Luminaire Tested: **24FCZ2-30HE-UNV-L82765-RDP-CP125-W2A-U-5700K**

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: P309840
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-CP125-W2A-U-5700K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" POLYCARB SHEET
Light Source: (336) 5700K 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: 1923.0 lumens
Efficiency: N/A
Efficacy: 88.6 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

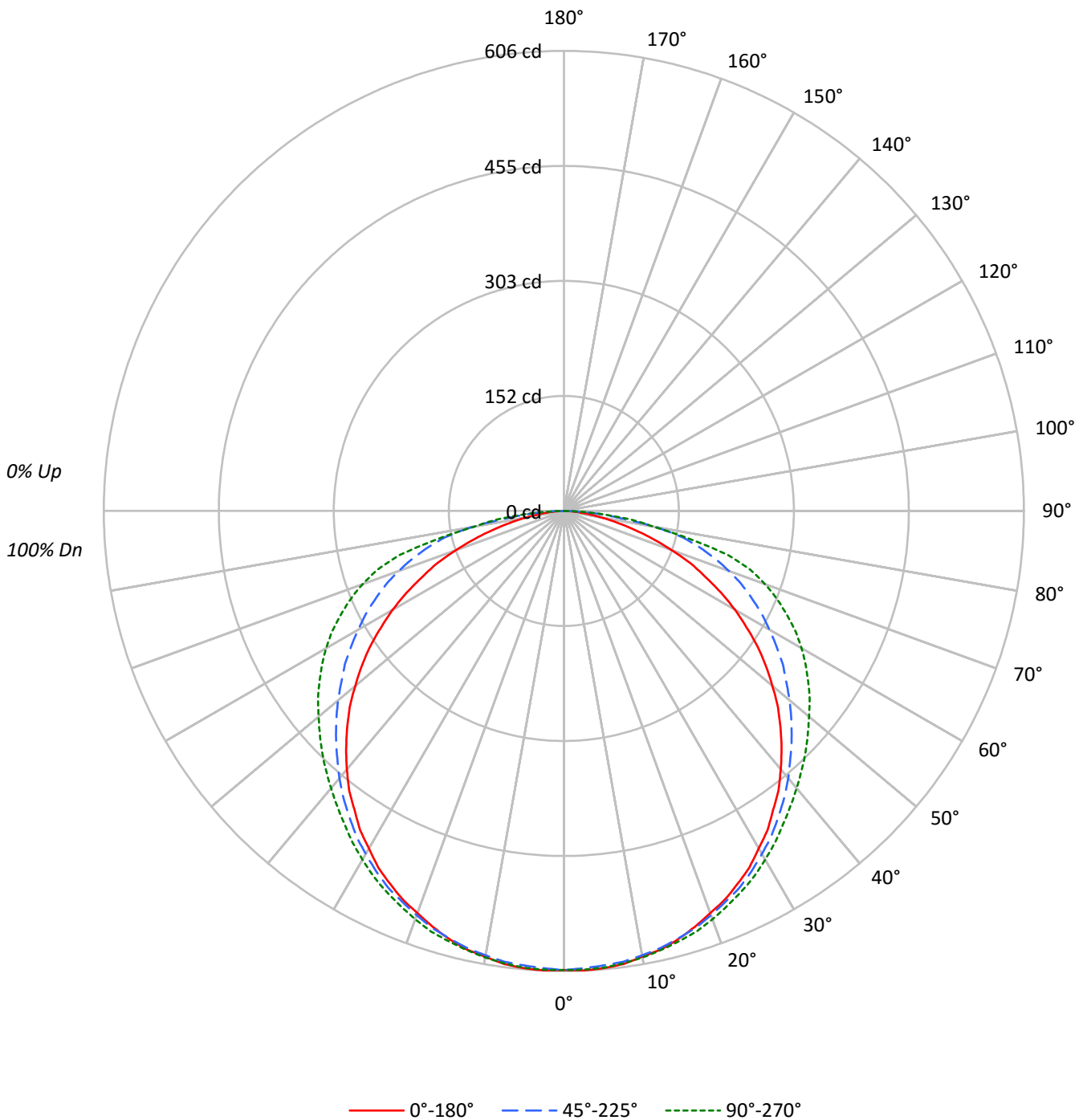
Input Watts (W): 21.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	814	814	814
5°	817	812	816
10°	814	812	816
15°	813	812	817
20°	807	811	819
25°	804	813	821
30°	797	811	824
35°	790	808	827
40°	781	807	838
45°	768	808	857
50°	751	813	882
55°	732	826	922
60°	701	842	973
65°	656	871	1032
70°	597	912	1111
75°	506	962	1160
80°	399	969	938
85°	295	736	824



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	57.4	3.0
10°-20°	165.1	8.6
20°-30°	252.5	13.1
30°-40°	308.6	16.0
40°-50°	328.9	17.1
50°-60°	314.5	16.4
60°-70°	266.4	13.9
70°-80°	179.1	9.3
80°-90°	50.5	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°	474.9	24.7
0°-40°	783.5	40.7
0°-60°	1427.0	74.2
0°-90°	1923.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1923.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	605	605	605	605	605	
5°	605	604	601	604	604	57
15°	584	584	583	588	587	165
25°	542	544	548	552	553	250
35°	481	484	492	502	504	301
45°	404	410	424	443	450	311
55°	312	323	352	380	393	278
65°	206	227	274	310	324	205
75°	97	133	185	216	223	104
85°	19	39	48	52	53	24
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	604.7	604.7	604.7	604.7	604.7
2.5°	605.7	605.7	602.8	604.7	604.7
5°	604.7	603.8	600.9	603.8	603.8
7.5°	601.9	600.9	599.0	601.9	600.9
10°	596.1	596.1	594.2	597.1	597.1
12.5°	591.4	590.4	589.5	593.3	592.3
15°	583.7	583.7	582.8	587.6	586.6
17.5°	574.2	575.2	576.1	579.9	580.9
20°	563.7	565.6	566.6	572.3	572.3
22.5°	554.2	555.1	557.0	562.8	562.8
25°	541.8	543.7	547.5	552.3	553.2
27.5°	529.4	530.3	535.1	541.8	542.7
30°	513.2	516.0	521.7	529.4	530.3
32.5°	498.9	501.7	508.4	516.0	517.9
35°	480.7	484.5	492.2	501.7	503.6
37.5°	464.5	467.4	476.9	487.4	490.3
40°	444.5	450.2	459.7	472.1	476.9
42.5°	424.5	430.2	441.6	457.8	463.6
45°	403.5	410.1	424.5	442.6	450.2
47.5°	382.5	390.1	406.3	427.3	435.9
50°	358.6	368.2	388.2	412.1	421.6
52.5°	335.7	347.2	369.1	395.8	408.2
55°	311.9	323.3	352.0	379.6	393.0
57.5°	285.2	300.5	331.9	363.4	377.7
60°	260.4	274.7	312.9	347.2	361.5
62.5°	233.7	252.8	293.8	330.0	344.3
65°	206.0	227.0	273.7	310.0	324.3
67.5°	181.2	204.1	253.7	290.0	304.3
70°	151.7	180.3	231.8	268.0	282.3
72.5°	124.0	155.5	208.9	244.2	257.5
75°	97.3	132.6	185.0	216.5	223.2
77.5°	72.5	109.7	160.2	173.6	168.8
80°	51.5	87.8	125.0	118.3	121.1
82.5°	33.4	66.8	77.3	87.8	90.6
85°	19.1	39.1	47.7	51.5	53.4
87.5°	8.6	14.3	19.1	19.1	18.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)