

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: P308162

Luminaire Tested: **22FCZ2-29HE-UNV-L82765-HRP-CA125-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: P308162
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-22)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 22FCZ2-29HE-UNV-L82765-HRP-CA125-W2A-U-4000K
Description: 2'X2' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" ACRYLIC SHEET
Light Source: (168) 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: 1984.0 lumens
Efficiency: N/A
Efficacy: 87.4 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

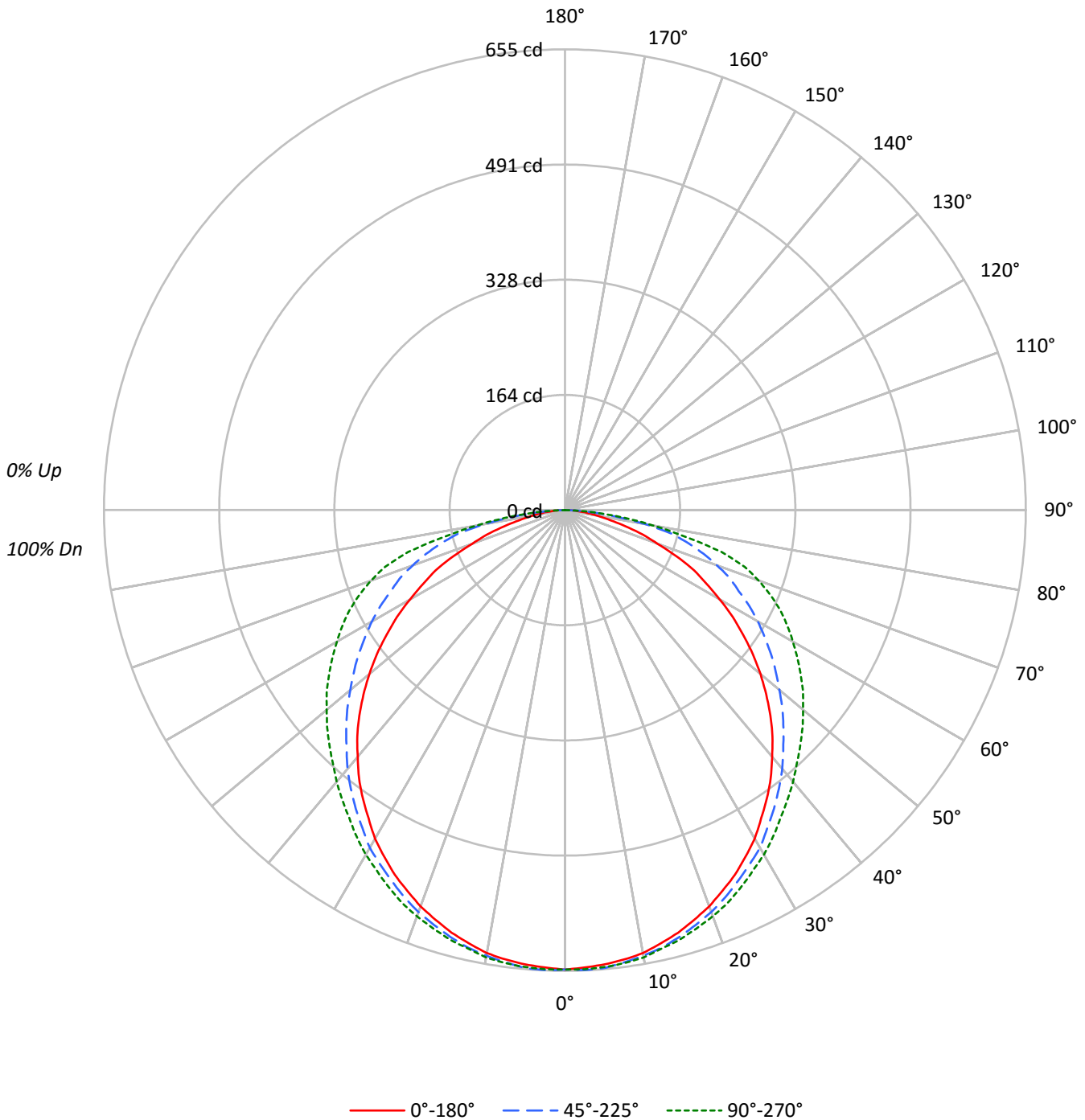
Input Watts (W): 22.7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	87	84	82
2	98	89	82	76	95	87	80	75	84	78	73	80	75	71	77	73	70	68
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59	56
4	81	69	59	52	79	67	59	52	65	57	51	62	56	51	60	55	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	39	50	43	38	49	43	38	36
7	64	50	41	34	62	49	40	34	47	40	34	46	39	34	44	38	33	31
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28
9	55	42	33	28	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	25	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1758	1758	1758
5°	1751	1765	1761
10°	1747	1758	1765
15°	1733	1750	1761
20°	1717	1742	1760
25°	1698	1728	1758
30°	1676	1723	1758
35°	1645	1702	1756
40°	1609	1688	1772
45°	1572	1672	1800
50°	1519	1666	1850
55°	1450	1679	1920
60°	1368	1704	2014
65°	1291	1737	2152
70°	1103	1812	2305
75°	924	1887	2394
80°	756	1822	1998
85°	658	1352	1470



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	61.9	3.1
10°-20°	177.1	8.9
20°-30°	268.4	13.5
30°-40°	324.1	16.3
40°-50°	340.6	17.2
50°-60°	320.4	16.2
60°-70°	267.2	13.5
70°-80°	177.0	8.9
80°-90°	47.2	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°	507.5	25.6
0°-40°	831.6	41.9
0°-60°	1492.6	75.2
0°-90°	1984.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1984.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	653	653	653	653	653	
5°	648	650	653	653	652	62
15°	622	624	628	631	632	175
25°	572	576	582	590	592	263
35°	501	506	518	529	534	313
45°	413	419	439	462	473	318
55°	309	323	358	394	409	277
65°	203	220	273	318	338	197
75°	89	124	182	219	230	96
85°	21	32	44	48	48	25
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	653.3	653.3	653.3	653.3	653.3
2.5°	650.8	652.1	654.6	654.6	653.3
5°	648.3	649.6	653.3	653.3	652.1
7.5°	644.5	645.8	648.3	650.8	649.6
10°	639.5	640.8	643.3	645.8	645.8
12.5°	630.8	632.0	637.0	638.3	638.3
15°	622.0	624.5	628.3	630.8	632.0
17.5°	610.8	613.3	618.3	623.3	623.3
20°	599.5	602.0	608.3	613.3	614.5
22.5°	585.7	589.5	595.7	602.0	604.5
25°	572.0	575.7	582.0	589.5	592.0
27.5°	555.7	559.4	568.2	577.0	578.2
30°	539.4	543.2	554.4	561.9	565.7
32.5°	519.4	524.4	535.7	546.9	550.7
35°	500.6	505.6	518.1	529.4	534.4
37.5°	480.6	485.6	499.4	513.1	519.4
40°	458.1	464.3	480.6	495.6	504.4
42.5°	436.8	443.0	459.3	479.3	488.1
45°	413.0	419.3	439.3	461.8	473.1
47.5°	388.0	395.5	419.3	446.8	458.1
50°	362.9	371.7	398.0	429.3	441.8
52.5°	336.7	347.9	378.0	411.8	426.8
55°	309.1	322.9	357.9	394.2	409.3
57.5°	282.9	295.4	336.7	375.5	391.7
60°	254.1	270.3	316.6	356.7	374.2
62.5°	226.5	244.1	295.4	337.9	356.7
65°	202.8	220.3	272.8	317.9	337.9
67.5°	171.5	195.2	254.1	296.6	316.6
70°	140.2	172.7	230.3	274.1	292.9
72.5°	116.4	147.7	206.5	250.3	267.8
75°	88.9	123.9	181.5	219.0	230.3
77.5°	66.3	102.6	155.2	174.0	175.2
80°	48.8	78.8	117.6	123.9	128.9
82.5°	33.8	55.1	76.3	83.9	86.4
85°	21.3	32.5	43.8	47.6	47.6
87.5°	11.3	12.5	15.0	15.0	15.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)