

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: P308972

Luminaire Tested: **22FCZ2-29HE-UNV-L82765-S-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: P308972
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-23)
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-S-CA125-W2A-U-4000K
Description: 2'X2' TROFFER LED MODULE, SMOOTH 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: 2693.0 lumens
Efficiency: N/A
Efficacy: 118.6 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 1.26 / 1.34
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

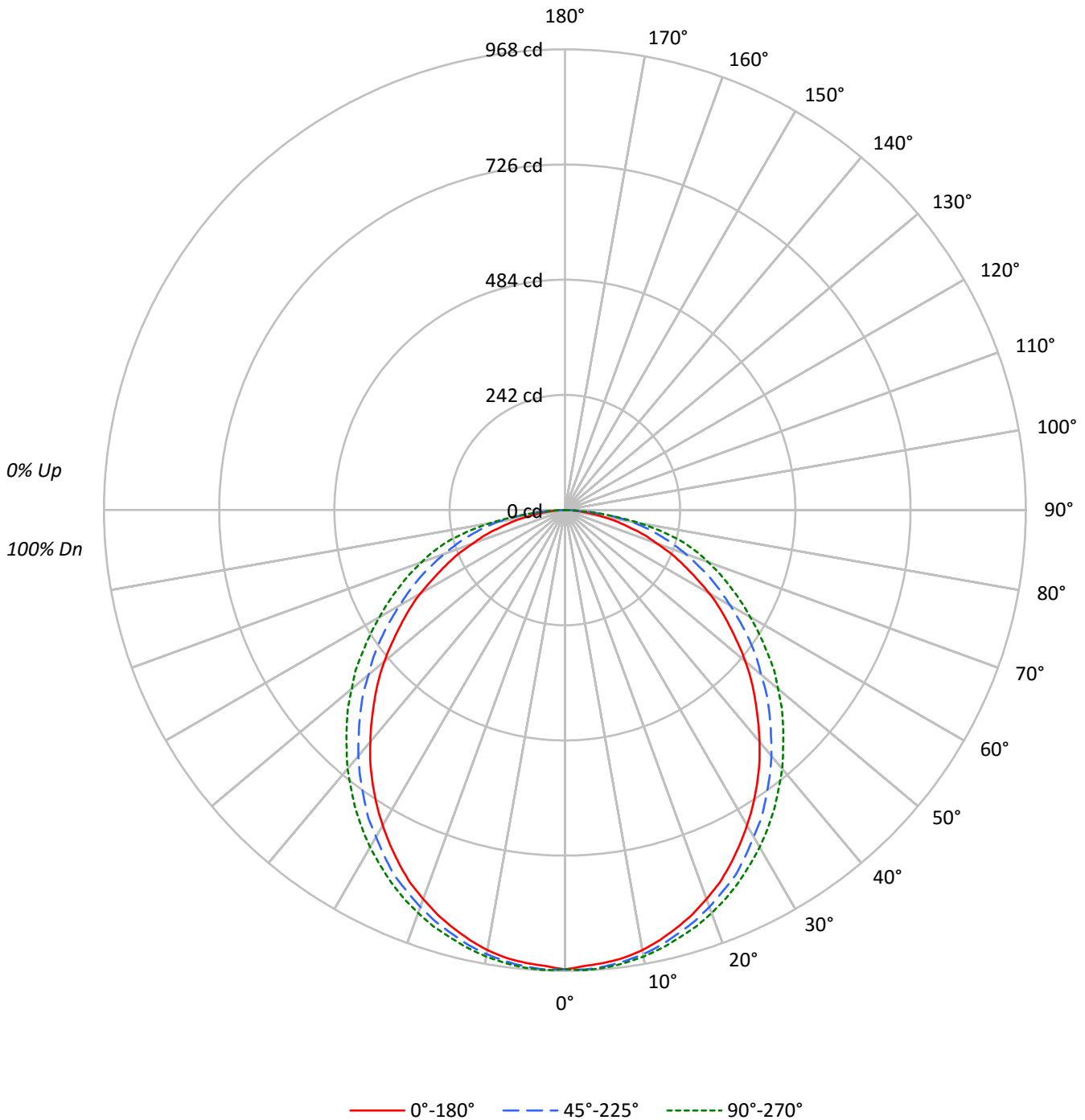
Input Watts (W): 22.7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83
2	98	90	83	77	96	88	82	76	84	79	74	81	77	73	78	74	71	69
3	90	79	71	64	87	77	70	63	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	69	60	54	66	59	53	64	57	52	61	56	52	49
5	75	62	53	47	73	61	53	46	59	52	46	57	51	45	55	50	45	43
6	70	56	47	41	68	55	47	41	53	46	40	52	45	40	50	44	39	37
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	28	27
10	53	40	32	26	51	39	31	26	38	31	26	37	31	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2597	2597	2597
5°	2579	2600	2607
10°	2565	2589	2602
15°	2531	2566	2590
20°	2490	2540	2580
25°	2440	2515	2563
30°	2378	2463	2542
35°	2311	2419	2518
40°	2233	2370	2494
45°	2152	2314	2467
50°	2073	2251	2446
55°	1975	2211	2429
60°	1887	2157	2421
65°	1760	2144	2448
70°	1622	2125	2521
75°	1463	2155	2652
80°	1266	2219	2492
85°	1047	1862	1862



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	91.3	3.4
10°-20°	259.7	9.6
20°-30°	388.6	14.4
30°-40°	460.2	17.1
40°-50°	469.0	17.4
50°-60°	420.3	15.6
60°-70°	329.1	12.2
70°-80°	212.2	7.9
80°-90°	62.7	2.3
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°	739.5	27.5
0°-40°	1199.7	44.5
0°-60°	2089.0	77.6
0°-90°	2693.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2693.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	965	965	965	965	965	
5°	955	957	962	964	965	91
15°	908	914	921	928	930	256
25°	822	829	847	858	863	378
35°	704	712	736	759	766	440
45°	565	578	608	640	648	437
55°	421	435	471	504	518	377
65°	276	293	337	369	384	275
75°	141	162	207	242	255	151
85°	34	46	60	60	60	40
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	965.0	965.0	965.0	965.0	965.0
2.5°	958.7	961.2	966.2	967.5	967.5
5°	954.9	957.4	962.5	963.7	965.0
7.5°	948.7	949.9	956.2	958.7	960.0
10°	938.6	941.1	947.4	951.2	952.4
12.5°	924.8	928.5	936.1	941.1	942.4
15°	908.4	913.5	921.0	928.5	929.8
17.5°	890.9	895.9	905.9	914.7	917.2
20°	869.5	875.8	887.1	897.1	900.9
22.5°	848.1	853.2	867.0	879.5	883.3
25°	821.7	829.3	846.9	858.2	863.2
27.5°	794.1	802.9	820.5	835.6	840.6
30°	765.2	774.0	792.8	811.7	818.0
32.5°	735.0	745.1	767.7	786.6	792.8
35°	703.6	712.4	736.3	758.9	766.5
37.5°	671.0	678.5	706.1	730.0	737.6
40°	635.8	645.8	674.7	702.4	709.9
42.5°	600.6	611.9	640.8	671.0	678.5
45°	565.4	578.0	608.1	639.6	648.3
47.5°	531.5	541.5	575.5	605.6	618.2
50°	495.1	505.1	537.8	571.7	584.3
52.5°	457.4	471.2	506.4	539.0	554.1
55°	420.9	434.7	471.2	503.9	517.7
57.5°	387.0	398.3	436.0	469.9	483.7
60°	350.6	360.6	400.8	437.3	449.8
62.5°	311.6	326.7	368.2	402.1	417.2
65°	276.4	292.8	336.7	369.4	384.5
67.5°	243.8	258.8	301.6	336.7	353.1
70°	206.1	226.2	270.1	305.3	320.4
72.5°	175.9	193.5	238.7	273.9	290.2
75°	140.7	162.1	207.3	242.5	255.1
77.5°	111.8	133.2	175.9	203.6	209.8
80°	81.7	103.0	143.2	157.1	160.8
82.5°	55.3	75.4	103.0	106.8	108.1
85°	33.9	46.5	60.3	60.3	60.3
87.5°	16.3	18.8	21.4	20.1	20.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)