

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: P312951

Luminaire Tested: **22FCZ2-29HE-UNV-L83050-S-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: P312951
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-L83050-S-CP125-W2A-U-3500K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.125" POLYCARB SHEET
Light Source: (168) 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: 2645.0 lumens
Efficiency: N/A
Efficacy: 118.1 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

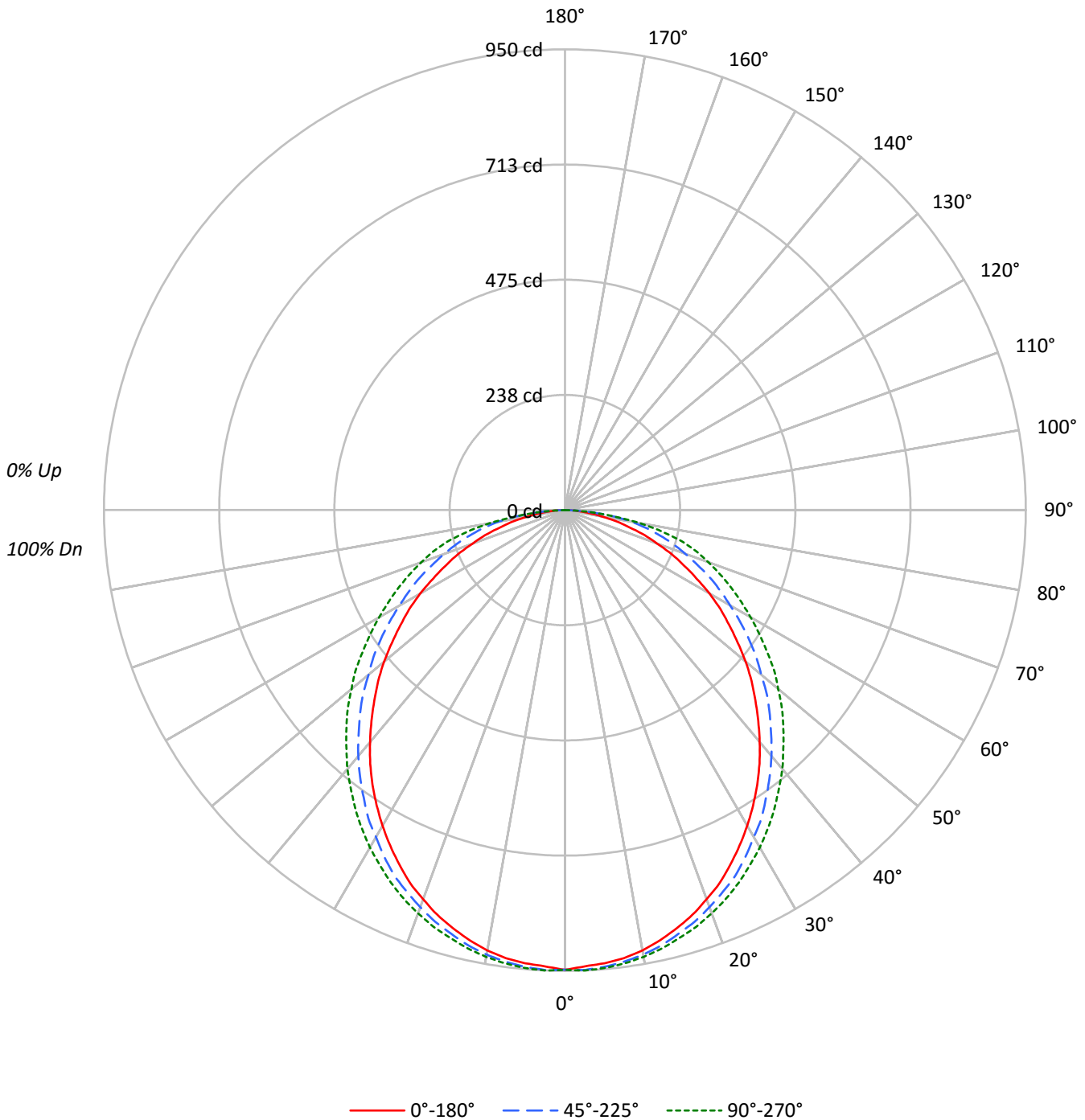
Input Watts (W): 22.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2551	2551	2551
5°	2534	2553	2560
10°	2519	2543	2556
15°	2486	2520	2544
20°	2446	2495	2534
25°	2396	2470	2517
30°	2335	2420	2496
35°	2270	2376	2473
40°	2194	2328	2449
45°	2113	2273	2423
50°	2035	2211	2403
55°	1939	2171	2385
60°	1853	2119	2378
65°	1729	2106	2404
70°	1592	2087	2476
75°	1437	2117	2604
80°	1243	2180	2448
85°	1028	1828	1828



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	89.6	3.4
10°-20°	255.1	9.6
20°-30°	381.7	14.4
30°-40°	452.0	17.1
40°-50°	460.6	17.4
50°-60°	412.8	15.6
60°-70°	323.2	12.2
70°-80°	208.4	7.9
80°-90°	61.6	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°	726.4	27.5
0°-40°	1178.3	44.5
0°-60°	2051.8	77.6
0°-90°	2645.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2645.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	948	948	948	948	948	
5°	938	940	945	947	948	89
15°	892	897	905	912	913	252
25°	807	814	832	843	848	372
35°	691	700	723	745	753	432
45°	555	568	597	628	637	429
55°	413	427	463	495	508	371
65°	272	288	331	363	378	270
75°	138	159	204	238	250	148
85°	33	46	59	59	59	39
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	947.8	947.8	947.8	947.8	947.8
2.5°	941.6	944.1	949.0	950.3	950.3
5°	937.9	940.4	945.3	946.6	947.8
7.5°	931.7	933.0	939.1	941.6	942.8
10°	921.9	924.3	930.5	934.2	935.4
12.5°	908.3	912.0	919.4	924.3	925.6
15°	892.3	897.2	904.6	912.0	913.2
17.5°	875.0	879.9	889.8	898.4	900.9
20°	854.0	860.2	871.3	881.1	884.8
22.5°	833.0	838.0	851.5	863.9	867.6
25°	807.1	814.5	831.8	842.9	847.8
27.5°	779.9	788.6	805.9	820.7	825.6
30°	751.6	760.2	778.7	797.2	803.4
32.5°	721.9	731.8	754.0	772.5	778.7
35°	691.1	699.7	723.2	745.4	752.8
37.5°	659.0	666.4	693.6	717.0	724.4
40°	624.5	634.3	662.7	689.9	697.3
42.5°	589.9	601.0	629.4	659.0	666.4
45°	555.3	567.7	597.3	628.2	636.8
47.5°	522.0	531.9	565.2	594.8	607.2
50°	486.2	496.1	528.2	561.5	573.9
52.5°	449.2	462.8	497.3	529.4	544.2
55°	413.4	427.0	462.8	494.9	508.4
57.5°	380.1	391.2	428.2	461.6	475.1
60°	344.3	354.2	393.7	429.5	441.8
62.5°	306.1	320.9	361.6	394.9	409.7
65°	271.5	287.5	330.7	362.8	377.6
67.5°	239.4	254.2	296.2	330.7	346.8
70°	202.4	222.1	265.3	299.9	314.7
72.5°	172.8	190.1	234.5	269.0	285.1
75°	138.2	159.2	203.6	238.2	250.5
77.5°	109.8	130.8	172.8	199.9	206.1
80°	80.2	101.2	140.7	154.3	158.0
82.5°	54.3	74.0	101.2	104.9	106.1
85°	33.3	45.7	59.2	59.2	59.2
87.5°	16.0	18.5	21.0	19.7	19.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)