

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: P312653

Luminaire Tested: **22FCZ2-29HE-UNV-L83050-RDP-CP125-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: P312653
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-24)
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-RDP-CP125-W2A-U-4500K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" POLYCARB SHEET
Light Source: (168) 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: 1779.0 lumens
Efficiency: N/A
Efficacy: 75.7 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

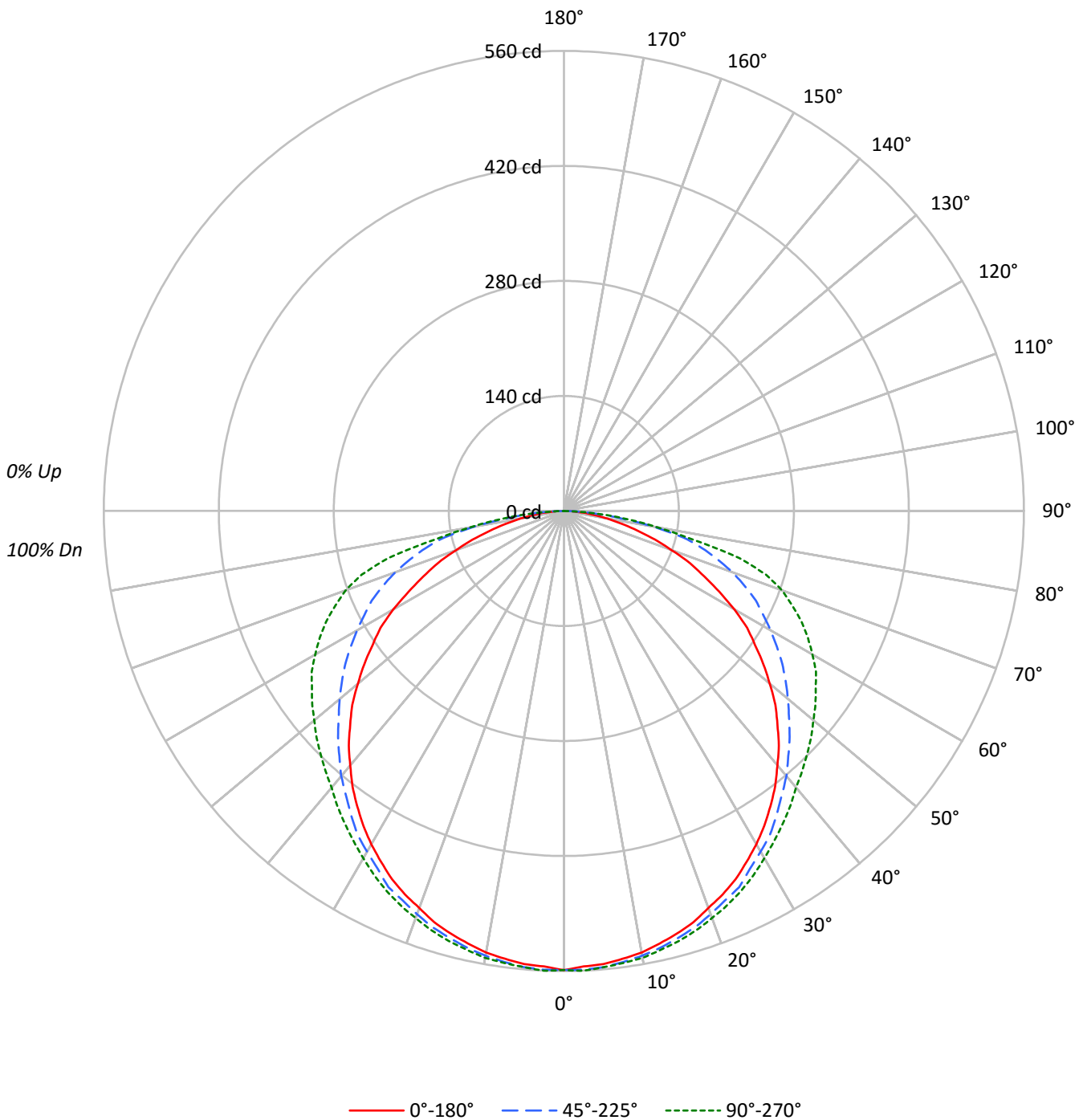
Input Watts (W): 23.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	92	89	92	89	86	88	86	84	82
2	97	88	81	75	95	86	80	74	83	77	72	80	75	71	76	72	69	67
3	88	77	68	61	86	75	67	61	72	65	60	70	64	59	67	62	58	55
4	80	68	59	51	78	66	58	51	64	56	50	61	55	50	59	54	49	47
5	74	60	51	44	72	59	50	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	44	38	51	43	38	50	43	37	48	42	37	35
7	63	49	40	33	61	48	39	33	47	39	33	45	38	33	44	37	33	31
8	59	45	36	30	57	44	35	30	43	35	29	41	34	29	40	34	29	27
9	55	41	32	27	53	40	32	27	39	32	26	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°	1504	1504	1504
5°	1495	1506	1506
10°	1491	1502	1509
15°	1484	1499	1509
20°	1473	1495	1510
25°	1469	1500	1515
30°	1456	1488	1517
35°	1440	1483	1526
40°	1421	1480	1545
45°	1399	1479	1594
50°	1370	1490	1660
55°	1332	1523	1756
60°	1289	1563	1880
65°	1200	1642	2033
70°	1102	1720	2224
75°	966	1810	2300
80°	832	1723	1805
85°	729	1254	1374



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	52.9	3.0
10°-20°	151.8	8.5
20°-30°	231.6	13.0
30°-40°	282.7	15.9
40°-50°	302.3	17.0
50°-60°	291.8	16.4
60°-70°	251.2	14.1
70°-80°	170.0	9.6
80°-90°	44.8	2.5
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°	436.2	24.5
0°-40°	718.9	40.4
0°-60°	1313.0	73.8
0°-90°	1779.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1779.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	559	559	559	559	559	
5°	554	555	558	558	558	53
15°	533	534	538	540	542	150
25°	495	497	505	508	510	228
35°	438	442	452	461	465	274
45°	368	374	389	408	419	284
55°	284	293	325	357	374	254
65°	188	207	258	298	319	187
75°	93	123	174	209	221	100
85°	24	33	41	42	44	27
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	558.8	558.8	558.8	558.8	558.8
2.5°	554.9	556.2	558.8	558.8	560.1
5°	553.6	554.9	557.5	557.5	557.5
7.5°	549.7	551.0	553.6	554.9	554.9
10°	545.7	547.0	549.7	551.0	552.3
12.5°	539.2	540.5	544.4	547.0	547.0
15°	532.6	533.9	537.9	540.5	541.8
17.5°	524.8	527.4	531.3	533.9	535.3
20°	514.3	516.9	522.2	526.1	527.4
22.5°	505.2	507.8	513.0	516.9	519.6
25°	494.7	497.3	505.2	507.8	510.4
27.5°	481.6	484.2	490.8	496.0	499.9
30°	468.5	471.1	479.0	485.5	488.1
32.5°	454.1	458.0	467.2	472.4	476.4
35°	438.4	442.3	451.5	460.7	464.6
37.5°	422.7	426.6	435.8	447.6	452.8
40°	404.4	409.6	421.4	437.1	439.7
42.5°	387.4	393.9	404.4	422.7	429.3
45°	367.7	374.3	388.7	408.3	418.8
47.5°	349.4	356.0	371.7	395.2	408.3
50°	327.2	336.3	356.0	383.4	396.5
52.5°	306.2	314.1	340.3	370.4	386.1
55°	284.0	293.1	324.6	357.3	374.3
57.5°	264.4	272.2	307.5	344.2	363.8
60°	239.5	250.0	290.5	329.8	349.4
62.5°	213.3	229.0	273.5	314.1	335.0
65°	188.5	206.8	257.8	298.4	319.3
67.5°	166.2	185.8	238.2	281.4	301.0
70°	140.0	164.9	218.6	260.4	282.7
72.5°	116.5	144.0	196.3	238.2	257.8
75°	92.9	123.0	174.1	209.4	221.2
77.5°	72.0	100.8	149.2	159.7	161.0
80°	53.7	79.8	111.2	112.5	116.5
82.5°	36.6	56.3	72.0	78.5	79.8
85°	23.6	32.7	40.6	41.9	44.5
87.5°	10.5	11.8	14.4	13.1	13.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)