

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: P312651

Luminaire Tested: **22FCZ2-29HE-UNV-L83050-RDP-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: P312651
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-3500K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 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: 1679.0 lumens
Efficiency: N/A
Efficacy: 75.0 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

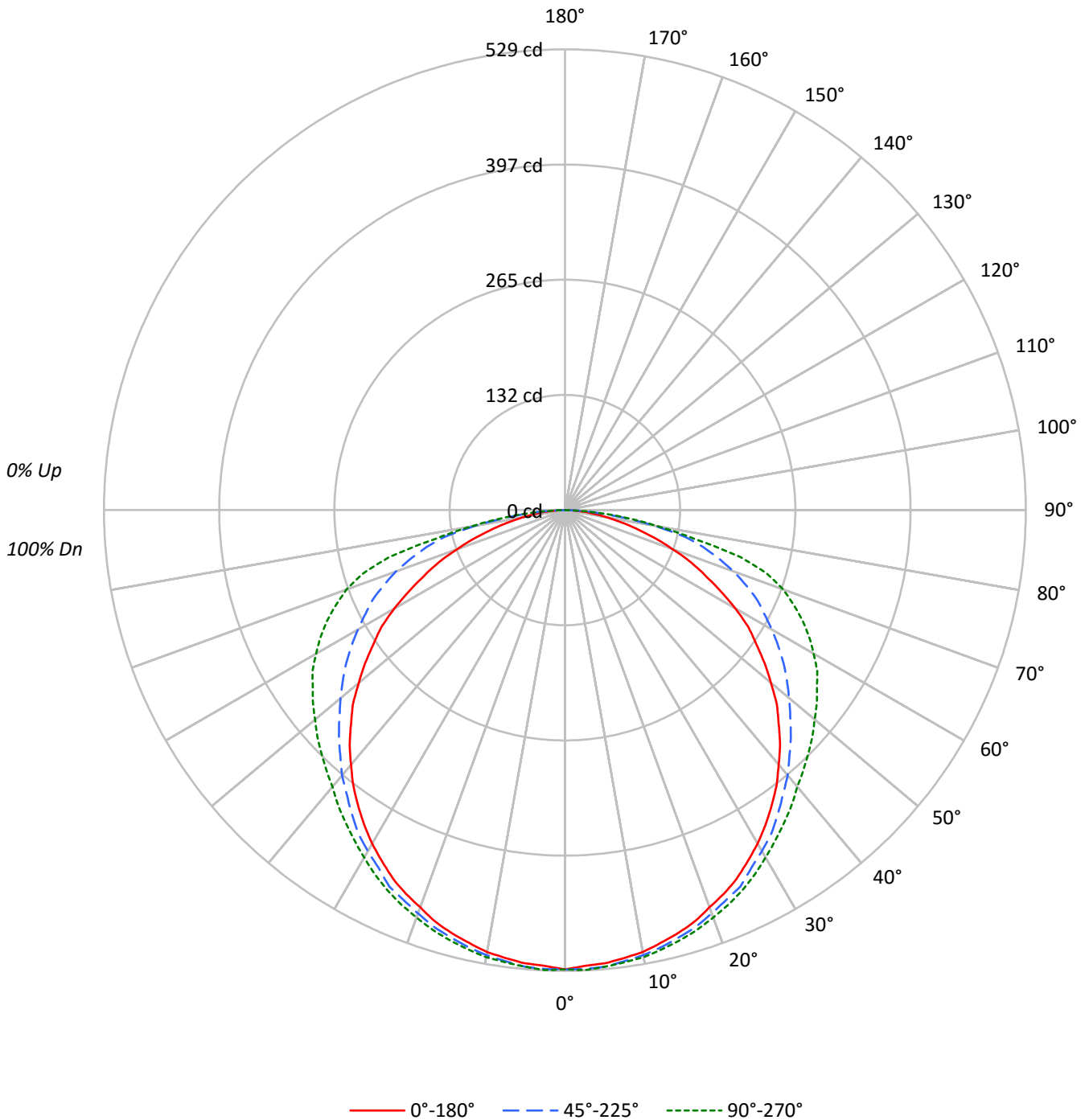
Input Watts (W): 22.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1419	1419	1419
5°	1411	1421	1421
10°	1408	1418	1424
15°	1400	1414	1424
20°	1390	1411	1426
25°	1386	1416	1430
30°	1374	1405	1432
35°	1359	1400	1441
40°	1341	1397	1458
45°	1321	1396	1504
50°	1293	1407	1567
55°	1257	1437	1657
60°	1216	1476	1775
65°	1133	1549	1919
70°	1040	1623	2099
75°	912	1708	2170
80°	784	1627	1703
85°	685	1183	1297



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	49.9	3.0
10°-20°	143.2	8.5
20°-30°	218.5	13.0
30°-40°	266.8	15.9
40°-50°	285.3	17.0
50°-60°	275.4	16.4
60°-70°	237.1	14.1
70°-80°	160.4	9.6
80°-90°	42.3	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°	411.7	24.5
0°-40°	678.5	40.4
0°-60°	1239.2	73.8
0°-90°	1679.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1679.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	527	527	527	527	527	
5°	522	524	526	526	526	50
15°	503	504	508	510	511	142
25°	467	469	477	479	482	215
35°	414	418	426	435	438	259
45°	347	353	367	385	395	268
55°	268	277	306	337	353	240
65°	178	195	243	282	301	177
75°	88	116	164	198	209	94
85°	22	31	38	40	42	25
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	527.4	527.4	527.4	527.4	527.4
2.5°	523.7	524.9	527.4	527.4	528.6
5°	522.5	523.7	526.2	526.2	526.2
7.5°	518.8	520.0	522.5	523.7	523.7
10°	515.1	516.3	518.8	520.0	521.2
12.5°	508.9	510.1	513.8	516.3	516.3
15°	502.7	503.9	507.6	510.1	511.3
17.5°	495.3	497.8	501.5	503.9	505.2
20°	485.4	487.9	492.8	496.5	497.8
22.5°	476.8	479.2	484.2	487.9	490.3
25°	466.9	469.4	476.8	479.2	481.7
27.5°	454.5	457.0	463.2	468.1	471.8
30°	442.2	444.6	452.1	458.2	460.7
32.5°	428.6	432.3	440.9	445.9	449.6
35°	413.8	417.5	426.1	434.8	438.5
37.5°	398.9	402.7	411.3	422.4	427.4
40°	381.7	386.6	397.7	412.5	415.0
42.5°	365.6	371.8	381.7	398.9	405.1
45°	347.1	353.2	366.8	385.4	395.2
47.5°	329.8	336.0	350.8	373.0	385.4
50°	308.8	317.4	336.0	361.9	374.2
52.5°	289.0	296.4	321.1	349.5	364.4
55°	268.0	276.7	306.3	337.2	353.2
57.5°	249.5	256.9	290.3	324.8	343.4
60°	226.0	235.9	274.2	311.3	329.8
62.5°	201.3	216.1	258.1	296.4	316.2
65°	177.9	195.2	243.3	281.6	301.4
67.5°	156.9	175.4	224.8	265.6	284.1
70°	132.2	155.6	206.3	245.8	266.8
72.5°	109.9	135.9	185.3	224.8	243.3
75°	87.7	116.1	164.3	197.6	208.7
77.5°	67.9	95.1	140.8	150.7	151.9
80°	50.6	75.3	105.0	106.2	109.9
82.5°	34.6	53.1	67.9	74.1	75.3
85°	22.2	30.9	38.3	39.5	42.0
87.5°	9.9	11.1	13.6	12.4	12.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)