

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: P308977

Luminaire Tested: **22FCZ2-29HE-UNV-L82765-S-CA125-W2A-U-6500K**

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: P308977
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-6500K
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: 2820.0 lumens
Efficiency: N/A
Efficacy: 120.5 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

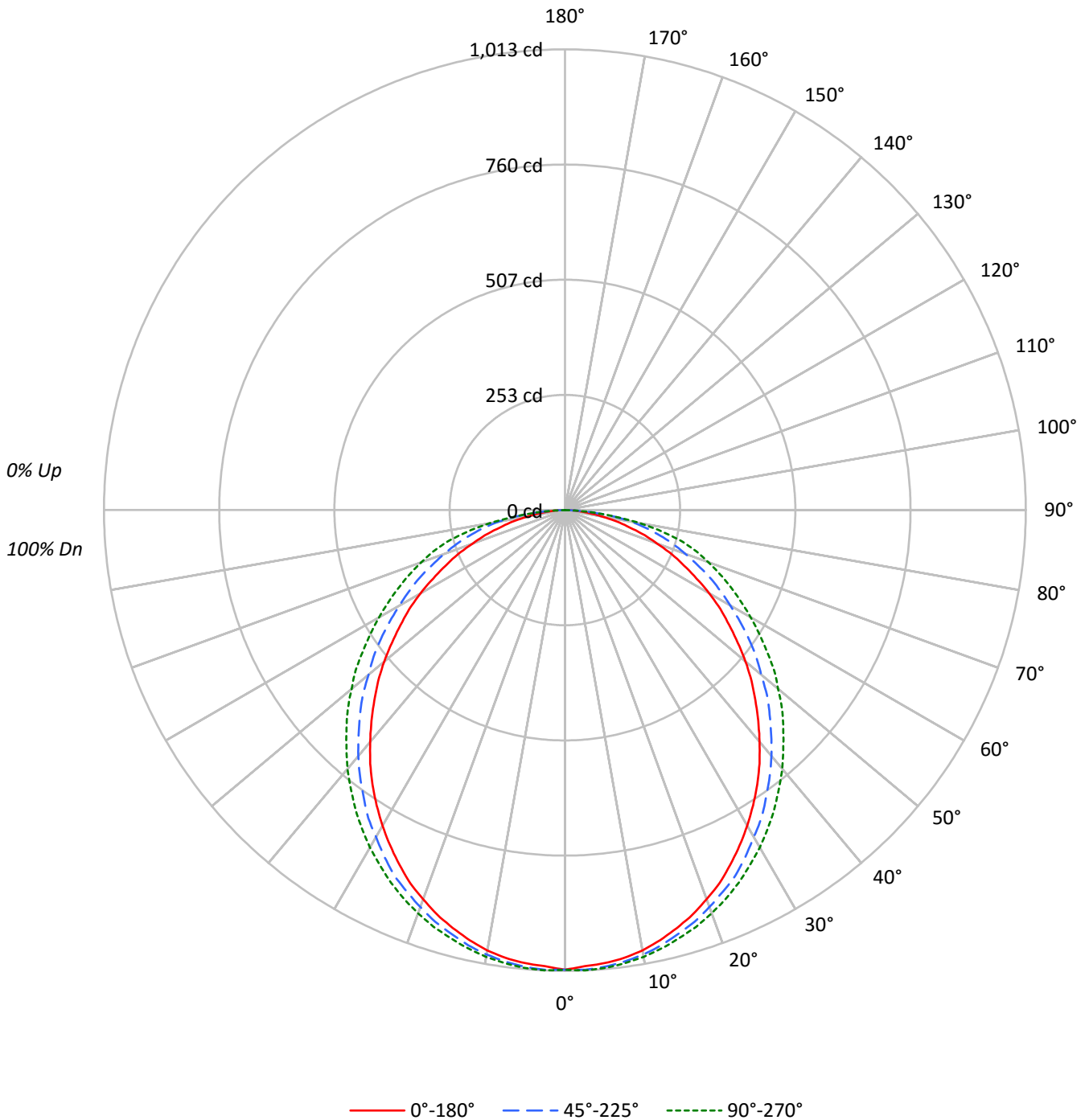
Input Watts (W): 23.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2719	2719	2719
5°	2701	2723	2730
10°	2686	2711	2725
15°	2650	2687	2713
20°	2607	2660	2702
25°	2555	2633	2684
30°	2490	2580	2662
35°	2420	2533	2637
40°	2339	2482	2611
45°	2253	2423	2584
50°	2170	2357	2561
55°	2068	2315	2543
60°	1976	2259	2535
65°	1843	2245	2564
70°	1698	2226	2640
75°	1533	2257	2777
80°	1325	2325	2610
85°	1096	1951	1951



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	95.6	3.4
10°-20°	271.9	9.6
20°-30°	406.9	14.4
30°-40°	481.9	17.1
40°-50°	491.1	17.4
50°-60°	440.2	15.6
60°-70°	344.6	12.2
70°-80°	222.2	7.9
80°-90°	65.7	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°	774.4	27.5
0°-40°	1256.3	44.5
0°-60°	2187.5	77.6
0°-90°	2820.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2820.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1010	1010	1010	1010	1010	
5°	1000	1003	1008	1009	1010	95
15°	951	956	964	972	974	268
25°	860	868	887	899	904	396
35°	737	746	771	795	803	460
45°	592	605	637	670	679	457
55°	441	455	493	528	542	395
65°	290	307	353	387	403	288
75°	147	170	217	254	267	158
85°	36	49	63	63	63	42
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1010.5	1010.5	1010.5	1010.5	1010.5
2.5°	1003.9	1006.5	1011.8	1013.1	1013.1
5°	1000.0	1002.6	1007.9	1009.2	1010.5
7.5°	993.4	994.7	1001.3	1003.9	1005.2
10°	982.9	985.5	992.1	996.0	997.3
12.5°	968.4	972.3	980.2	985.5	986.8
15°	951.3	956.5	964.4	972.3	973.7
17.5°	932.9	938.1	948.7	957.9	960.5
20°	910.5	917.1	928.9	939.4	943.4
22.5°	888.1	893.4	907.9	921.0	925.0
25°	860.5	868.4	886.8	898.7	903.9
27.5°	831.6	840.8	859.2	875.0	880.2
30°	801.3	810.5	830.2	850.0	856.6
32.5°	769.7	780.2	803.9	823.7	830.2
35°	736.8	746.0	771.0	794.7	802.6
37.5°	702.6	710.5	739.4	764.4	772.3
40°	665.8	676.3	706.6	735.5	743.4
42.5°	628.9	640.8	671.0	702.6	710.5
45°	592.1	605.2	636.8	669.7	678.9
47.5°	556.6	567.1	602.6	634.2	647.3
50°	518.4	528.9	563.1	598.7	611.8
52.5°	478.9	493.4	530.2	564.5	580.2
55°	440.8	455.2	493.4	527.6	542.1
57.5°	405.3	417.1	456.6	492.1	506.6
60°	367.1	377.6	419.7	457.9	471.0
62.5°	326.3	342.1	385.5	421.0	436.8
65°	289.5	306.6	352.6	386.8	402.6
67.5°	255.3	271.0	315.8	352.6	369.7
70°	215.8	236.8	282.9	319.7	335.5
72.5°	184.2	202.6	250.0	286.8	303.9
75°	147.4	169.7	217.1	253.9	267.1
77.5°	117.1	139.5	184.2	213.2	219.7
80°	85.5	107.9	150.0	164.5	168.4
82.5°	57.9	78.9	107.9	111.8	113.2
85°	35.5	48.7	63.2	63.2	63.2
87.5°	17.1	19.7	22.4	21.1	21.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)