

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: P308999

Luminaire Tested: **22FCZ2-29HE-UNV-L82765-S-CP250-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: P308999
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-CP250-W2A-U-4000K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.250" POLYCARB 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: 2508.0 lumens
Efficiency: N/A
Efficacy: 110.5 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

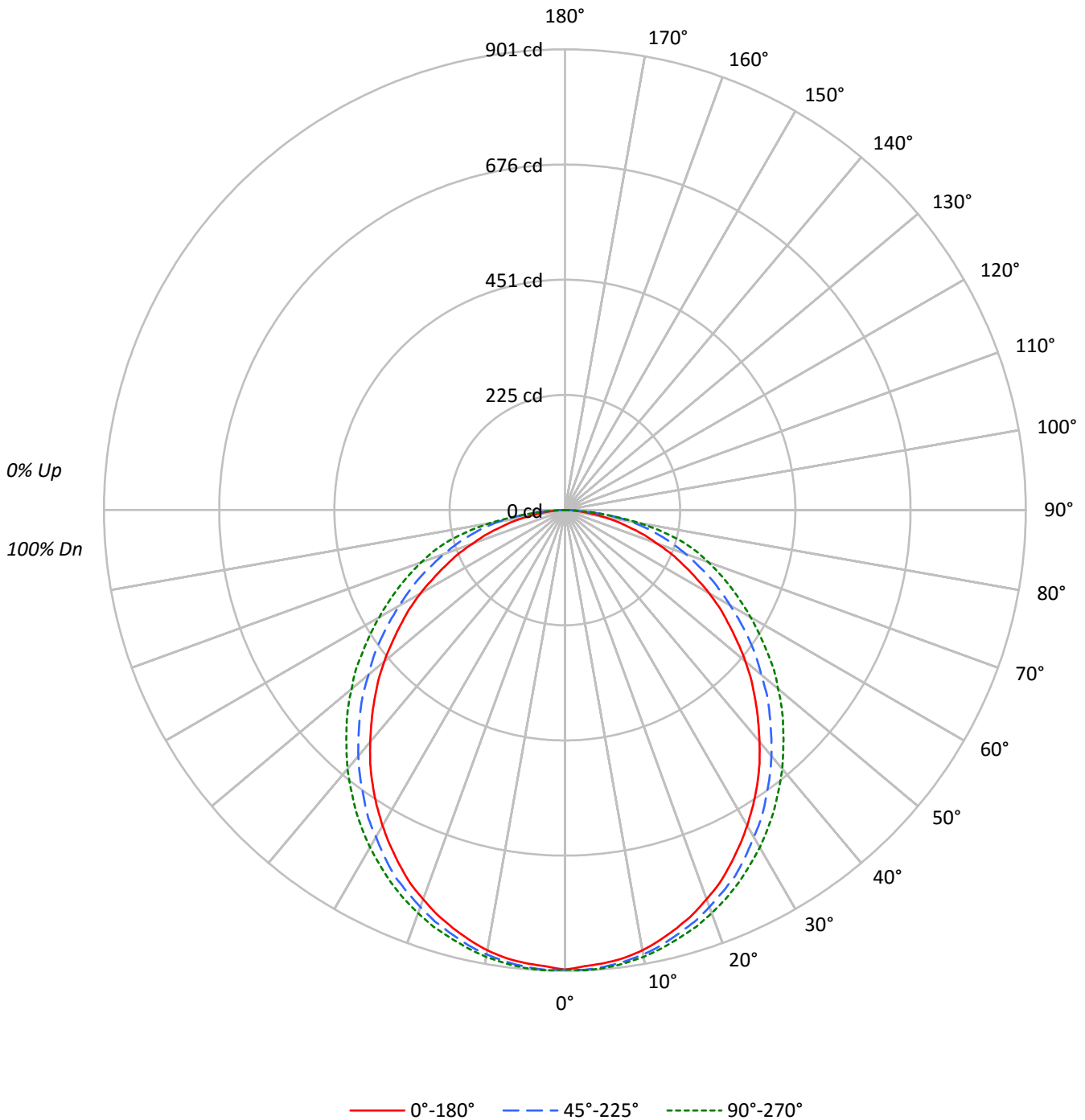
Input Watts (W): 22.7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2418	2418	2418
5°	2402	2421	2428
10°	2388	2411	2424
15°	2357	2389	2412
20°	2319	2366	2403
25°	2272	2342	2387
30°	2214	2294	2367
35°	2153	2253	2345
40°	2080	2207	2322
45°	2004	2156	2298
50°	1930	2097	2278
55°	1839	2059	2262
60°	1757	2009	2255
65°	1639	1997	2280
70°	1510	1980	2348
75°	1363	2008	2469
80°	1179	2067	2321
85°	976	1735	1735



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	85.0	3.4
10°-20°	241.9	9.6
20°-30°	361.9	14.4
30°-40°	428.6	17.1
40°-50°	436.8	17.4
50°-60°	391.4	15.6
60°-70°	306.5	12.2
70°-80°	197.6	7.9
80°-90°	58.4	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°	688.7	27.5
0°-40°	1117.3	44.5
0°-60°	1945.5	77.6
0°-90°	2508.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2508.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	899	899	899	899	899	
5°	889	892	896	898	899	84
15°	846	851	858	865	866	239
25°	765	772	789	799	804	352
35°	655	664	686	707	714	410
45°	527	538	566	596	604	407
55°	392	405	439	469	482	351
65°	257	273	314	344	358	256
75°	131	151	193	226	238	141
85°	32	43	56	56	56	37
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	898.7	898.7	898.7	<i>898.7</i>	898.7
2.5°	<i>892.8</i>	<i>895.2</i>	<i>899.9</i>	<i>901.0</i>	<i>901.0</i>
5°	889.3	891.7	896.4	<i>897.5</i>	898.7
7.5°	883.5	884.7	890.5	<i>892.8</i>	894.0
10°	874.1	876.5	882.3	<i>885.8</i>	887.0
12.5°	861.2	864.8	871.8	<i>876.5</i>	877.6
15°	846.0	850.7	857.7	<i>864.8</i>	865.9
17.5°	829.7	834.3	843.7	<i>851.9</i>	854.2
20°	809.8	815.6	826.1	<i>835.5</i>	839.0
22.5°	789.9	794.5	807.4	<i>819.1</i>	822.6
25°	765.3	772.3	788.7	<i>799.2</i>	803.9
27.5°	739.6	747.7	764.1	<i>778.2</i>	782.8
30°	712.6	720.8	738.4	<i>755.9</i>	761.8
32.5°	684.6	693.9	715.0	<i>732.5</i>	738.4
35°	655.3	663.5	685.7	<i>706.8</i>	713.8
37.5°	624.9	631.9	657.6	<i>679.9</i>	686.9
40°	592.1	601.5	628.4	<i>654.1</i>	661.1
42.5°	559.3	569.9	596.8	<i>624.9</i>	631.9
45°	526.6	538.3	566.4	<i>595.6</i>	603.8
47.5°	495.0	504.3	535.9	<i>564.0</i>	575.7
50°	461.0	470.4	500.8	<i>532.4</i>	544.1
52.5°	425.9	438.8	471.6	<i>502.0</i>	516.0
55°	392.0	404.9	438.8	<i>469.2</i>	482.1
57.5°	360.4	370.9	406.1	<i>437.6</i>	450.5
60°	326.5	335.8	373.3	<i>407.2</i>	418.9
62.5°	290.2	304.2	342.9	<i>374.5</i>	388.5
65°	257.4	272.7	313.6	<i>344.0</i>	358.1
67.5°	227.0	241.1	280.8	<i>313.6</i>	328.8
70°	191.9	210.6	251.6	<i>284.4</i>	298.4
72.5°	163.8	180.2	222.3	<i>255.1</i>	270.3
75°	131.1	151.0	193.1	<i>225.8</i>	237.5
77.5°	104.1	124.0	163.8	<i>189.6</i>	195.4
80°	76.1	96.0	133.4	<i>146.3</i>	149.8
82.5°	51.5	70.2	96.0	<i>99.5</i>	100.6
85°	31.6	43.3	56.2	<i>56.2</i>	56.2
87.5°	15.2	17.6	19.9	<i>18.7</i>	18.7
90°	0.0	0.0	0.0	<i>0.0</i>	0.0

(END OF REPORT)