

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: P312802

Luminaire Tested: **22FCZ2-29HE-UNV-L83050-CP125-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: P312802
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-33)
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-CP125-W2A-U-4000K
Description: 2'X2' TROFFER LED MODULE, RIBBED LENS, 0.125" POLYCARB SHEET
Light Source: (168) 4000K 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: 2634.0 lumens
Efficiency: N/A
Efficacy: 115.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.28 / 1.37
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

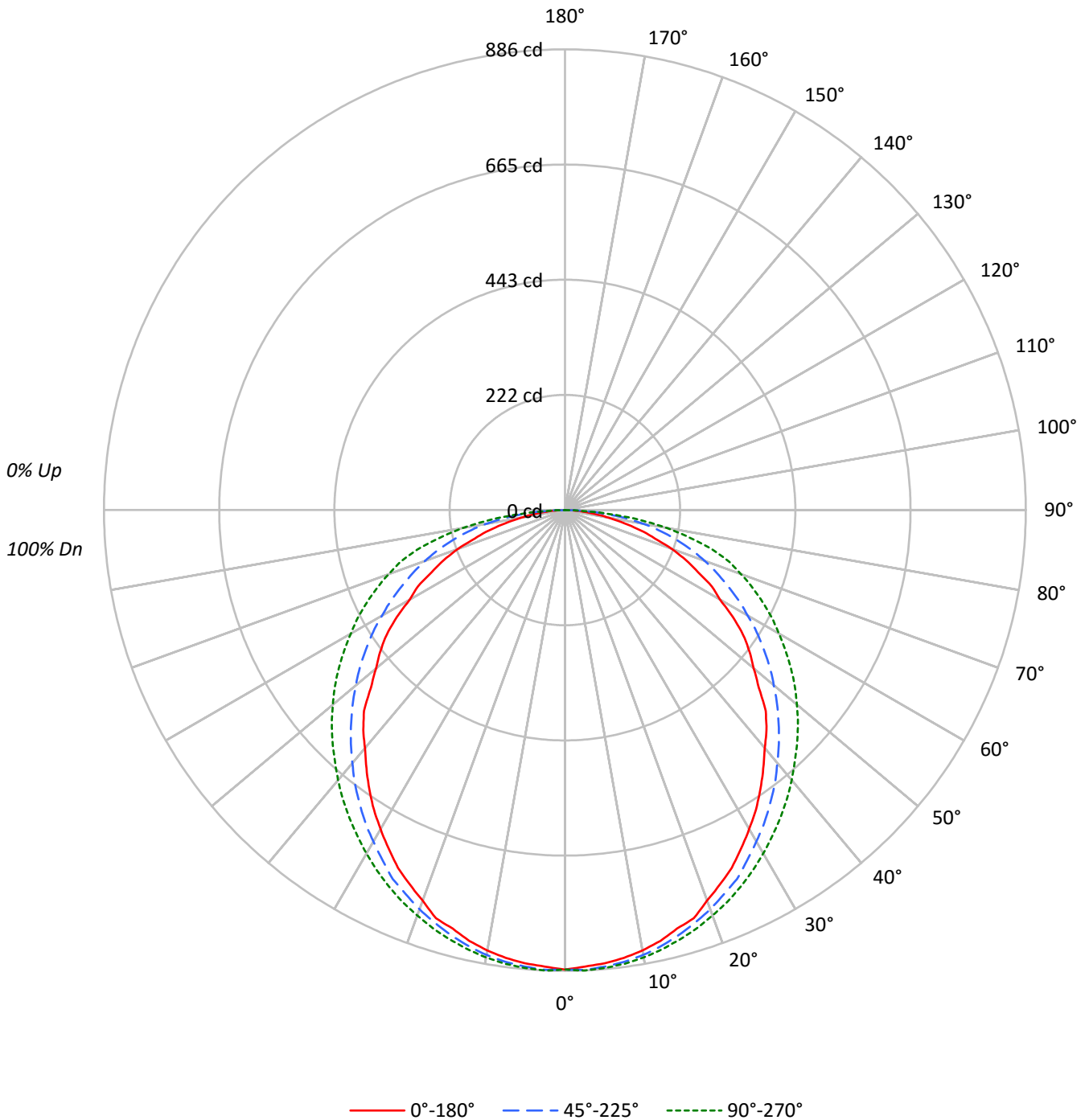
Input Watts (W): 22.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	93	90	92	89	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59	56
4	81	69	60	53	79	67	59	52	65	57	51	62	56	51	60	55	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	39	51	44	38	49	43	38	36
7	64	50	41	35	62	49	40	34	47	40	34	46	39	34	45	38	34	32
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28
9	55	42	33	28	54	41	33	28	40	33	27	39	32	27	38	32	27	25
10	52	38	30	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2378	2378	2378
5°	2363	2380	2387
10°	2349	2373	2387
15°	2321	2357	2381
20°	2289	2339	2375
25°	2253	2325	2373
30°	2202	2288	2370
35°	2153	2261	2373
40°	2099	2232	2382
45°	2077	2212	2404
50°	1984	2195	2438
55°	1963	2188	2490
60°	1852	2185	2558
65°	1798	2199	2673
70°	1726	2252	2837
75°	1573	2320	3054
80°	1348	2404	3087
85°	1090	2297	2646



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	83.6	3.2
10°-20°	238.6	9.1
20°-30°	359.0	13.6
30°-40°	430.9	16.4
40°-50°	450.4	17.1
50°-60°	419.7	15.9
60°-70°	344.2	13.1
70°-80°	232.0	8.8
80°-90°	75.6	2.9
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°	681.2	25.9
0°-40°	1112.1	42.2
0°-60°	1982.2	75.3
0°-90°	2634.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2634.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	884	884	884	884	884	
5°	875	877	881	882	884	83
15°	833	838	846	854	855	235
25°	759	764	783	794	799	349
35°	656	664	688	712	722	410
45°	546	550	581	616	632	417
55°	418	426	466	511	531	371
65°	282	295	345	396	420	281
75°	151	168	223	274	294	159
85°	35	50	74	87	86	42
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	883.7	883.7	883.7	883.7	883.7
2.5°	878.7	881.2	885.0	886.3	886.3
5°	874.9	877.4	881.2	882.5	883.7
7.5°	868.6	871.1	876.2	878.7	879.9
10°	859.8	862.3	868.6	872.4	873.6
12.5°	848.4	851.0	858.5	863.6	864.8
15°	833.3	838.3	845.9	853.5	854.7
17.5°	823.2	822.0	832.0	840.9	843.4
20°	799.3	805.6	816.9	827.0	829.5
22.5°	779.1	784.1	799.3	810.6	815.7
25°	758.9	764.0	782.9	794.2	799.3
27.5°	733.7	741.3	758.9	775.3	781.6
30°	708.5	716.1	736.2	755.1	762.7
32.5°	683.3	692.1	713.5	733.7	742.5
35°	655.5	664.4	688.3	712.3	722.4
37.5°	626.6	637.9	663.1	689.6	700.9
40°	597.6	608.9	635.4	665.6	678.2
42.5°	573.6	578.6	608.9	641.7	654.3
45°	545.9	549.7	581.2	616.5	631.6
47.5°	505.5	519.4	553.4	592.5	607.6
50°	474.0	489.1	524.4	566.0	582.4
52.5°	447.5	457.6	496.7	538.3	557.2
55°	418.5	426.1	466.4	510.6	530.7
57.5°	383.2	397.1	437.5	482.8	503.0
60°	344.2	361.8	405.9	455.1	475.3
62.5°	318.9	329.0	376.9	426.1	448.8
65°	282.4	295.0	345.4	395.9	419.8
67.5°	252.1	264.7	316.4	366.9	390.8
70°	219.4	232.0	286.2	336.6	360.6
72.5°	181.5	199.2	255.9	306.3	331.6
75°	151.3	167.7	223.1	273.6	293.7
77.5°	117.2	138.7	190.4	232.0	247.1
80°	87.0	108.4	155.1	185.3	199.2
82.5°	59.3	80.7	116.0	138.7	146.2
85°	35.3	50.4	74.4	87.0	85.7
87.5°	16.4	21.4	30.3	30.3	29.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)