

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: P308914

Luminaire Tested: **22FCZ2-20HE-UNV-L82765-S-CP250-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: P308914
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: 22FCZ2-20HE-UNV-L82765-S-CP250-W2A-U-6500K
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: 1991.0 lumens
Efficiency: N/A
Efficacy: 114.4 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

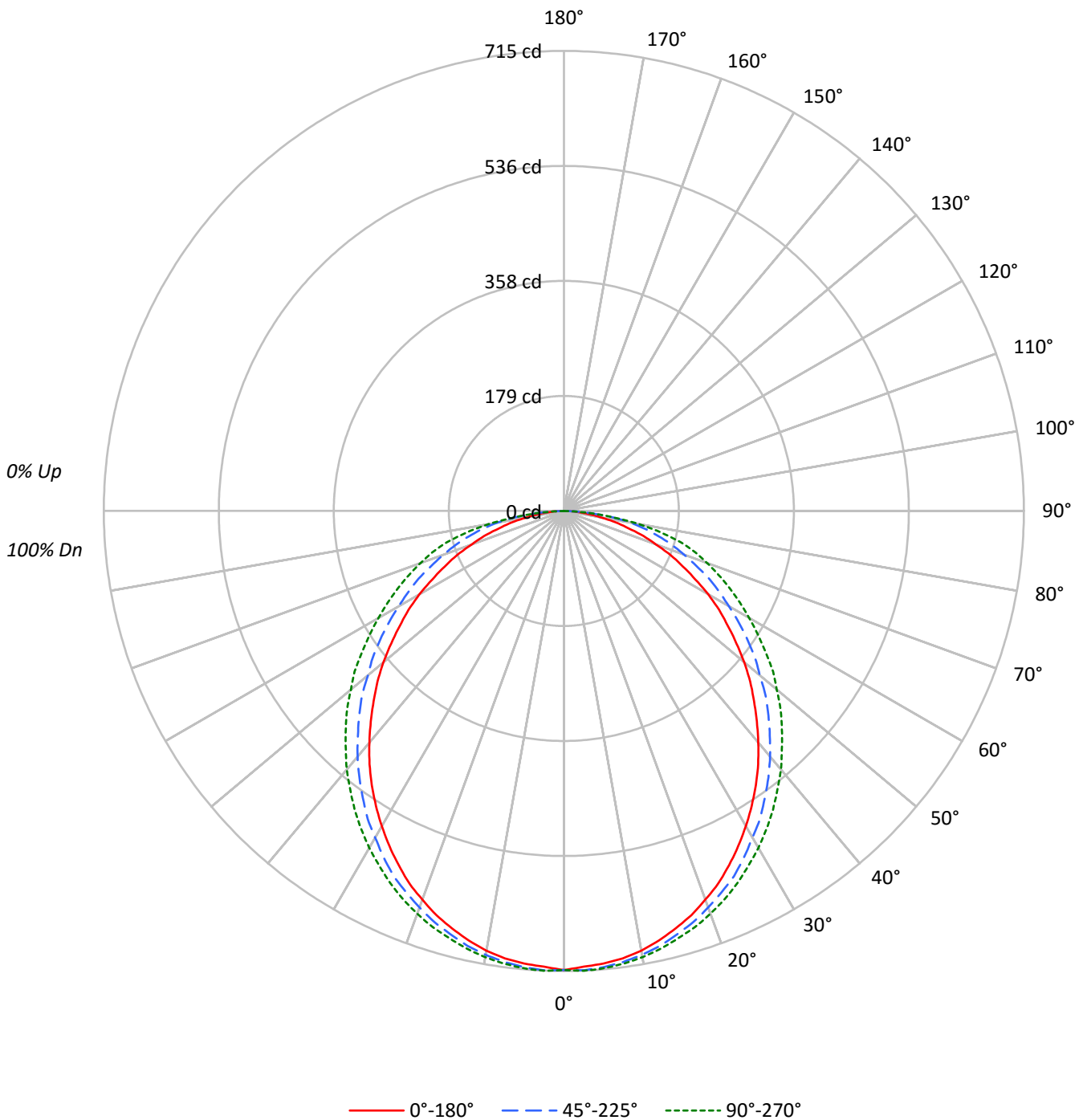
Input Watts (W): 17.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1920	1920	1920
5°	1907	1922	1927
10°	1896	1914	1924
15°	1871	1897	1915
20°	1841	1878	1907
25°	1804	1859	1895
30°	1758	1821	1879
35°	1709	1788	1862
40°	1651	1752	1844
45°	1591	1711	1824
50°	1532	1665	1809
55°	1460	1635	1795
60°	1395	1595	1790
65°	1301	1585	1810
70°	1198	1571	1864
75°	1081	1594	1961
80°	936	1641	1843
85°	775	1377	1377



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	67.5	3.4
10°-20°	192.0	9.6
20°-30°	287.3	14.4
30°-40°	340.2	17.1
40°-50°	346.7	17.4
50°-60°	310.8	15.6
60°-70°	243.3	12.2
70°-80°	156.9	7.9
80°-90°	46.4	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°	546.8	27.5
0°-40°	887.0	44.5
0°-60°	1544.5	77.6
0°-90°	1991.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1991.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	713	713	713	713	713	
5°	706	708	712	712	713	67
15°	672	675	681	686	687	189
25°	608	613	626	634	638	280
35°	520	527	544	561	567	325
45°	418	427	450	473	479	323
55°	311	321	348	372	383	279
65°	204	216	249	273	284	203
75°	104	120	153	179	189	112
85°	25	34	45	45	45	29
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	713.4	713.4	713.4	713.4	713.4
2.5°	708.8	710.7	714.4	715.3	715.3
5°	706.0	707.9	711.6	712.5	713.4
7.5°	701.4	702.3	706.9	708.8	709.7
10°	693.9	695.8	700.4	703.2	704.1
12.5°	683.7	686.5	692.1	695.8	696.7
15°	671.6	675.4	680.9	686.5	687.4
17.5°	658.6	662.3	669.8	676.3	678.1
20°	642.8	647.5	655.8	663.3	666.1
22.5°	627.0	630.8	641.0	650.3	653.1
25°	607.5	613.1	626.1	634.5	638.2
27.5°	587.1	593.6	606.6	617.8	621.5
30°	565.7	572.2	586.2	600.1	604.7
32.5°	543.4	550.9	567.6	581.5	586.2
35°	520.2	526.7	544.4	561.1	566.7
37.5°	496.1	501.6	522.1	539.7	545.3
40°	470.1	477.5	498.8	519.3	524.9
42.5°	444.0	452.4	473.8	496.1	501.6
45°	418.0	427.3	449.6	472.8	479.3
47.5°	392.9	400.4	425.5	447.8	457.0
50°	366.0	373.4	397.6	422.7	432.0
52.5°	338.1	348.4	374.4	398.5	409.7
55°	311.2	321.4	348.4	372.5	382.7
57.5°	286.1	294.5	322.3	347.4	357.6
60°	259.2	266.6	296.3	323.3	332.6
62.5°	230.4	241.5	272.2	297.3	308.4
65°	204.4	216.4	249.0	273.1	284.3
67.5°	180.2	191.4	222.9	249.0	261.0
70°	152.3	167.2	199.7	225.7	236.9
72.5°	130.1	143.1	176.5	202.5	214.6
75°	104.0	119.8	153.3	179.3	188.6
77.5°	82.7	98.5	130.1	150.5	155.1
80°	60.4	76.2	105.9	116.1	118.9
82.5°	40.9	55.7	76.2	79.0	79.9
85°	25.1	34.4	44.6	44.6	44.6
87.5°	12.1	13.9	15.8	14.9	14.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)