

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: P308880

Luminaire Tested: **22FCZ2-20HE-UNV-L82765-S-CA125-W2A-U-3000K**

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: P308880
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-CA125-W2A-U-3000K
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: 1930.0 lumens
Efficiency: N/A
Efficacy: 116.3 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

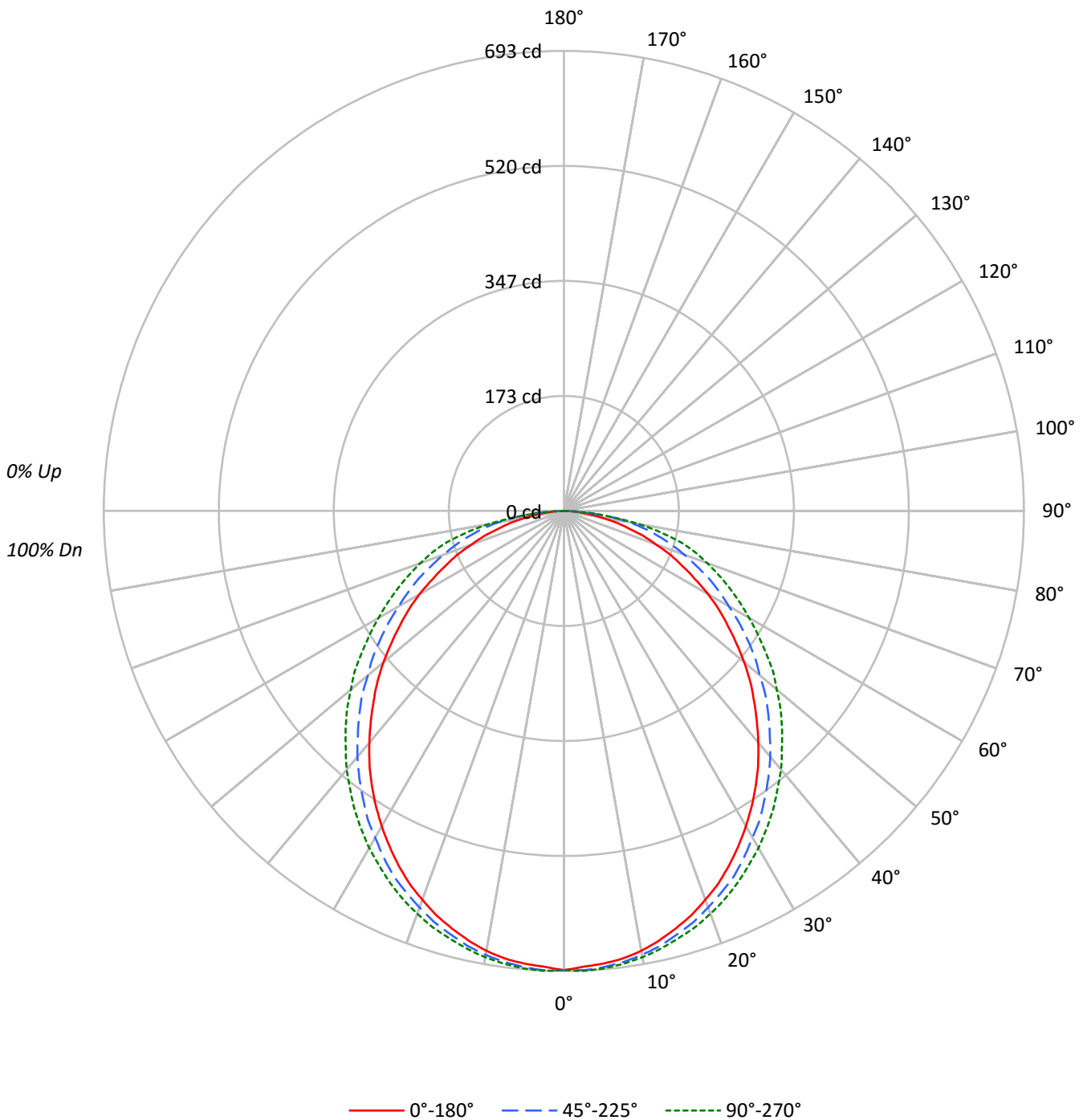
Input Watts (W): 16.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1861	1861	1861
5°	1849	1863	1868
10°	1838	1855	1865
15°	1814	1839	1857
20°	1784	1820	1849
25°	1749	1802	1837
30°	1704	1766	1821
35°	1657	1734	1804
40°	1600	1699	1787
45°	1542	1658	1768
50°	1485	1613	1753
55°	1415	1584	1741
60°	1352	1546	1735
65°	1261	1536	1755
70°	1162	1523	1806
75°	1049	1545	1901
80°	907	1592	1787
85°	750	1334	1334



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	65.4	3.4
10°-20°	186.1	9.6
20°-30°	278.5	14.4
30°-40°	329.8	17.1
40°-50°	336.1	17.4
50°-60°	301.3	15.6
60°-70°	235.8	12.2
70°-80°	152.1	7.9
80°-90°	44.9	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°	530.0	27.5
0°-40°	859.8	44.5
0°-60°	1497.2	77.6
0°-90°	1930.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1930.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	692	692	692	692	692	
5°	684	686	690	691	692	65
15°	651	655	660	666	666	184
25°	589	594	607	615	619	271
35°	504	511	528	544	549	315
45°	405	414	436	458	465	313
55°	302	312	338	361	371	270
65°	198	210	241	265	276	197
75°	101	116	149	174	183	108
85°	24	33	43	43	43	29
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	691.6	691.6	691.6	691.6	691.6
2.5°	687.1	688.9	692.5	693.4	693.4
5°	684.4	686.2	689.8	690.7	691.6
7.5°	679.9	680.8	685.3	687.1	688.0
10°	672.7	674.5	679.0	681.7	682.6
12.5°	662.8	665.5	670.9	674.5	675.4
15°	651.1	654.7	660.1	665.5	666.4
17.5°	638.5	642.1	649.3	655.6	657.4
20°	623.1	627.6	635.7	643.0	645.7
22.5°	607.8	611.4	621.3	630.3	633.0
25°	588.9	594.3	606.9	615.0	618.6
27.5°	569.1	575.4	588.0	598.8	602.4
30°	548.4	554.7	568.2	581.7	586.2
32.5°	526.8	534.0	550.2	563.7	568.2
35°	504.3	510.6	527.7	543.9	549.3
37.5°	480.9	486.3	506.1	523.2	528.6
40°	455.6	462.9	483.6	503.4	508.8
42.5°	430.4	438.5	459.3	480.9	486.3
45°	405.2	414.2	435.8	458.4	464.7
47.5°	380.9	388.1	412.4	434.0	443.0
50°	354.8	362.0	385.4	409.7	418.7
52.5°	327.8	337.7	362.9	386.3	397.1
55°	301.7	311.6	337.7	361.1	371.0
57.5°	277.4	285.5	312.5	336.8	346.7
60°	251.2	258.4	287.3	313.4	322.4
62.5°	223.3	234.1	263.8	288.2	299.0
65°	198.1	209.8	241.3	264.7	275.6
67.5°	174.7	185.5	216.1	241.3	253.0
70°	147.7	162.1	193.6	218.8	229.6
72.5°	126.1	138.7	171.1	196.3	208.0
75°	100.9	116.2	148.6	173.8	182.8
77.5°	80.1	95.5	126.1	145.9	150.4
80°	58.5	73.8	102.7	112.6	115.3
82.5°	39.6	54.0	73.8	76.5	77.4
85°	24.3	33.3	43.2	43.2	43.2
87.5°	11.7	13.5	15.3	14.4	14.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)