

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: P312895

Luminaire Tested: **22FCZ2-20HE-UNV-L83050-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: P312895
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-L83050-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

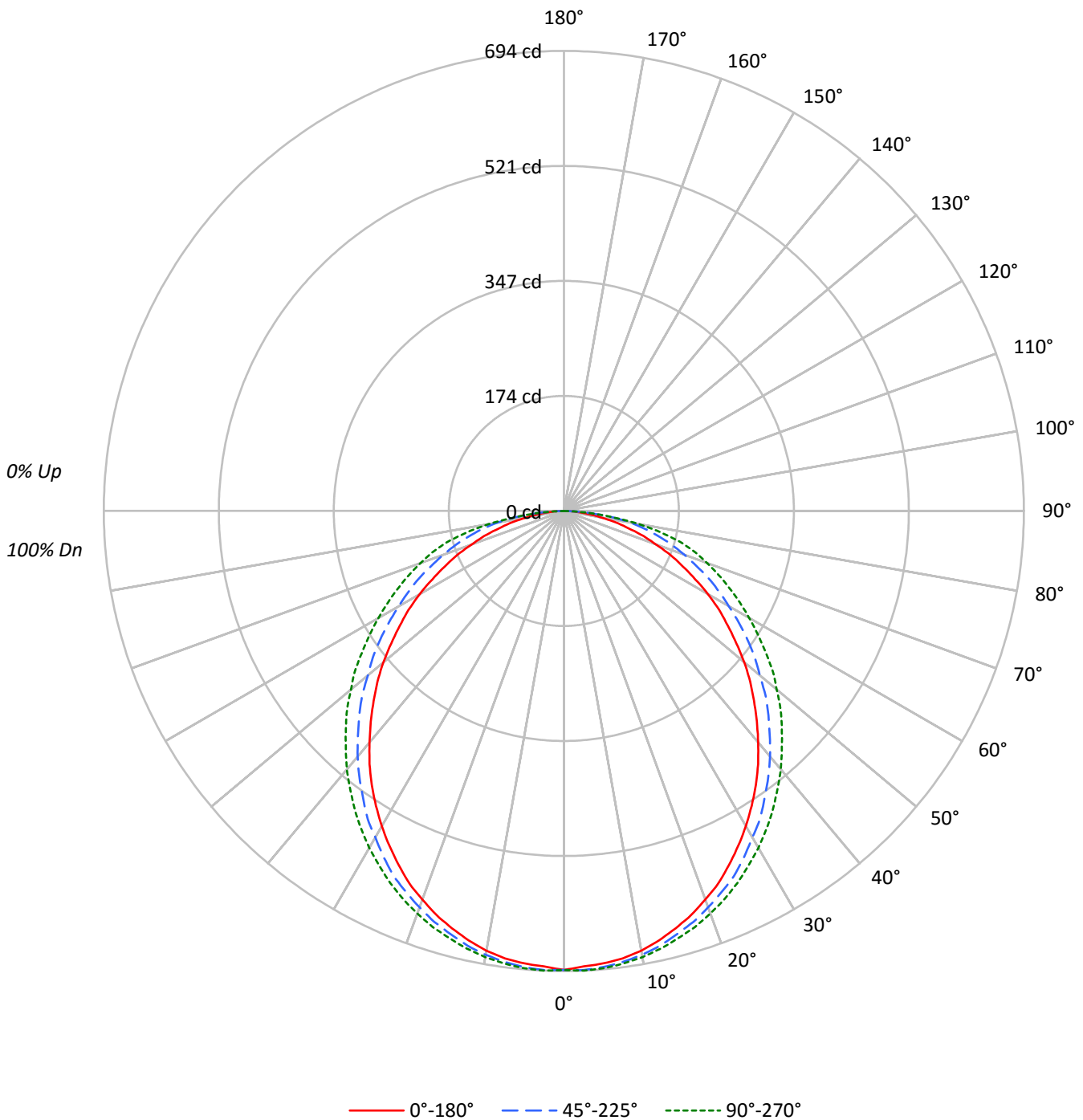
Lumens per Lamp: N/A
Luminaire Lumens: 1932.0 lumens
Efficiency: N/A
Efficacy: 115.7 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 1.26 / 1.34
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 16.7
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°	1863	1863	1863
5°	1851	1865	1870
10°	1840	1857	1867
15°	1816	1841	1858
20°	1786	1822	1851
25°	1750	1804	1839
30°	1706	1767	1823
35°	1658	1735	1806
40°	1602	1701	1789
45°	1544	1660	1770
50°	1487	1615	1755
55°	1417	1586	1742
60°	1354	1548	1737
65°	1263	1538	1756
70°	1163	1525	1809
75°	1050	1546	1903
80°	908	1593	1788
85°	750	1337	1337



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	65.5	3.4
10°-20°	186.3	9.6
20°-30°	278.8	14.4
30°-40°	330.1	17.1
40°-50°	336.5	17.4
50°-60°	301.6	15.6
60°-70°	236.1	12.2
70°-80°	152.2	7.9
80°-90°	45.0	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°	530.6	27.5
0°-40°	860.7	44.5
0°-60°	1498.7	77.6
0°-90°	1932.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1932.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	692	692	692	692	692	
5°	685	687	690	691	692	65
15°	652	655	661	666	667	184
25°	590	595	608	616	619	271
35°	505	511	528	544	550	315
45°	406	415	436	459	465	313
55°	302	312	338	362	371	271
65°	198	210	242	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°	692.3	692.3	692.3	692.3	692.3
2.5°	687.8	689.6	693.2	694.1	694.1
5°	685.1	686.9	690.5	691.4	692.3
7.5°	680.6	681.5	686.0	687.8	688.7
10°	673.4	675.2	679.7	682.4	683.3
12.5°	663.5	666.2	671.6	675.2	676.1
15°	651.7	655.3	660.7	666.2	667.1
17.5°	639.1	642.7	649.9	656.2	658.0
20°	623.8	628.3	636.4	643.6	646.3
22.5°	608.5	612.1	622.0	631.0	633.7
25°	589.5	594.9	607.6	615.7	619.3
27.5°	569.7	576.0	588.6	599.4	603.1
30°	549.0	555.3	568.8	582.3	586.8
32.5°	527.3	534.5	550.8	564.3	568.8
35°	504.8	511.1	528.2	544.5	549.9
37.5°	481.4	486.8	506.6	523.7	529.1
40°	456.1	463.3	484.1	503.9	509.3
42.5°	430.9	439.0	459.7	481.4	486.8
45°	405.6	414.7	436.3	458.8	465.1
47.5°	381.3	388.5	412.9	434.5	443.5
50°	355.2	362.4	385.8	410.1	419.2
52.5°	328.1	338.0	363.3	386.7	397.5
55°	302.0	311.9	338.0	361.5	371.4
57.5°	277.6	285.8	312.8	337.1	347.0
60°	251.5	258.7	287.6	313.7	322.7
62.5°	223.6	234.4	264.1	288.5	299.3
65°	198.3	210.0	241.6	265.0	275.8
67.5°	174.9	185.7	216.3	241.6	253.3
70°	147.8	162.3	193.8	219.0	229.9
72.5°	126.2	138.8	171.3	196.5	208.2
75°	101.0	116.3	148.7	174.0	183.0
77.5°	80.2	95.6	126.2	146.0	150.5
80°	58.6	73.9	102.8	112.7	115.4
82.5°	39.7	54.1	73.9	76.6	77.5
85°	24.3	33.4	43.3	43.3	43.3
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)