

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: P312900

Luminaire Tested: **22FCZ2-20HE-UNV-L83050-S-CP125-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: P312900
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-CP125-W2A-U-3000K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.125" 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: 1895.0 lumens
Efficiency: N/A
Efficacy: 113.5 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

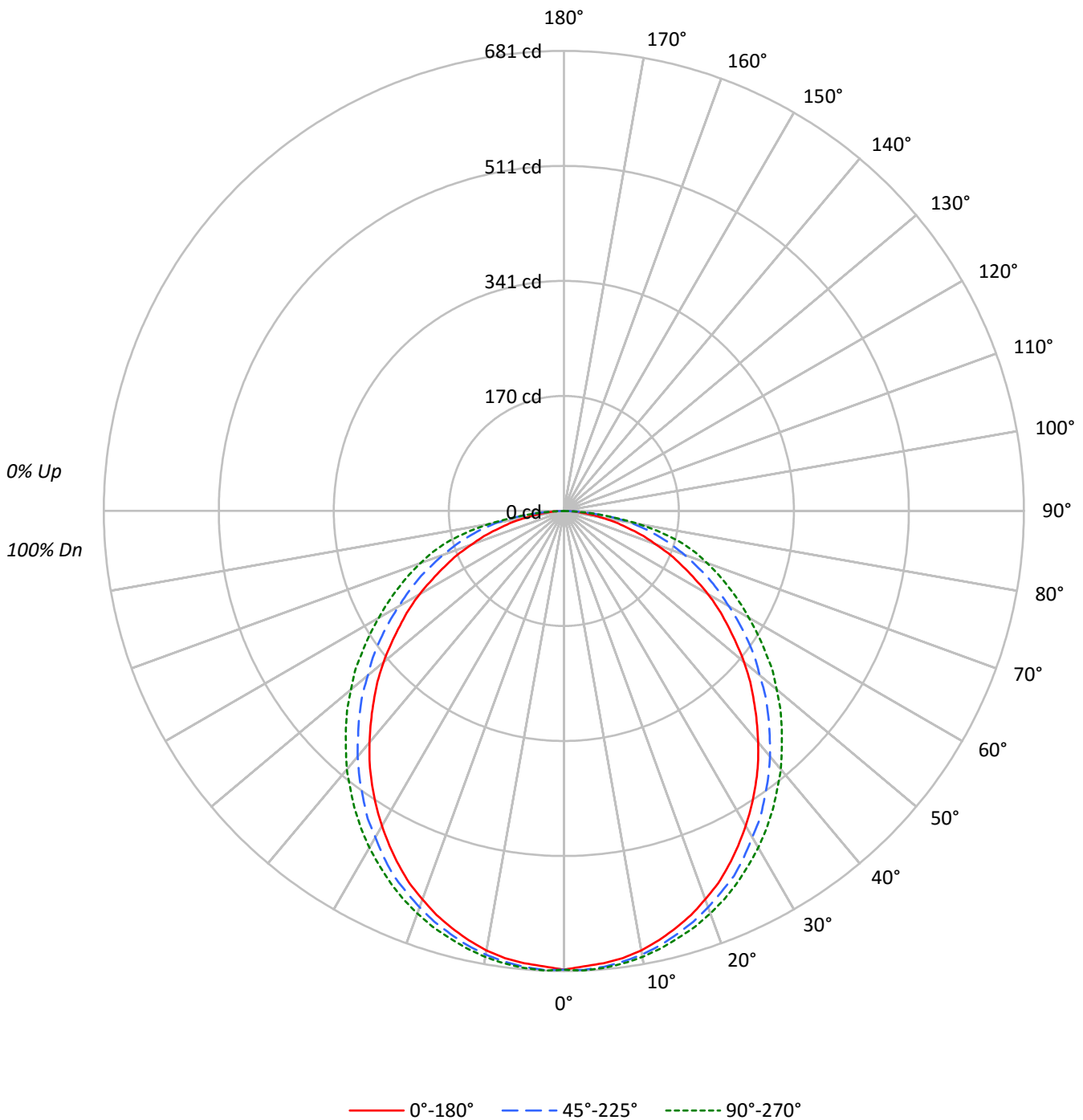
Input Watts (W): 16.7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1827	1827	1827
5°	1815	1830	1834
10°	1805	1822	1831
15°	1781	1806	1823
20°	1752	1788	1815
25°	1717	1769	1803
30°	1673	1734	1789
35°	1626	1702	1772
40°	1572	1668	1755
45°	1514	1628	1736
50°	1459	1584	1721
55°	1390	1556	1709
60°	1328	1518	1703
65°	1238	1509	1723
70°	1141	1496	1774
75°	1029	1517	1866
80°	891	1562	1754
85°	738	1309	1309



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	64.2	3.4
10°-20°	182.7	9.6
20°-30°	273.4	14.4
30°-40°	323.8	17.1
40°-50°	330.0	17.4
50°-60°	295.8	15.6
60°-70°	231.6	12.2
70°-80°	149.3	7.9
80°-90°	44.1	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°	520.4	27.5
0°-40°	844.2	44.5
0°-60°	1470.0	77.6
0°-90°	1895.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1895.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	679	679	679	679	679	
5°	672	674	677	678	679	64
15°	639	643	648	653	654	180
25°	578	584	596	604	607	266
35°	495	501	518	534	539	309
45°	398	407	428	450	456	307
55°	296	306	332	354	364	266
65°	194	206	237	260	271	193
75°	99	114	146	171	180	106
85°	24	33	42	42	42	28
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	679.0	679.0	679.0	679.0	679.0
2.5°	674.6	676.4	679.9	680.8	680.8
5°	672.0	673.7	677.3	678.2	679.0
7.5°	667.5	668.4	672.8	674.6	675.5
10°	660.5	662.2	666.7	669.3	670.2
12.5°	650.7	653.4	658.7	662.2	663.1
15°	639.3	642.8	648.1	653.4	654.3
17.5°	626.9	630.4	637.5	643.7	645.4
20°	611.8	616.3	624.2	631.3	633.9
22.5°	596.8	600.3	610.1	618.9	621.6
25°	578.2	583.5	595.9	603.9	607.4
27.5°	558.8	565.0	577.4	588.0	591.5
30°	538.5	544.6	557.9	571.2	575.6
32.5°	517.2	524.3	540.2	553.5	557.9
35°	495.1	501.3	518.1	534.0	539.3
37.5°	472.1	477.4	496.9	513.7	519.0
40°	447.4	454.5	474.8	494.2	499.6
42.5°	422.6	430.6	450.9	472.1	477.4
45°	397.9	406.7	427.9	450.0	456.2
47.5°	374.0	381.1	404.9	426.2	435.0
50°	348.4	355.4	378.4	402.3	411.1
52.5°	321.8	331.6	356.3	379.3	389.9
55°	296.2	305.9	331.6	354.5	364.3
57.5°	272.3	280.3	306.8	330.7	340.4
60°	246.7	253.8	282.0	307.7	316.5
62.5°	219.3	229.9	259.1	282.9	293.5
65°	194.5	206.0	237.0	259.9	270.6
67.5°	171.5	182.1	212.2	237.0	248.4
70°	145.0	159.1	190.1	214.9	225.5
72.5°	123.8	136.2	168.0	192.7	204.2
75°	99.0	114.1	145.9	170.6	179.5
77.5°	78.7	93.7	123.8	143.2	147.7
80°	57.5	72.5	100.8	110.5	113.2
82.5°	38.9	53.0	72.5	75.2	76.0
85°	23.9	32.7	42.4	42.4	42.4
87.5°	11.5	13.3	15.0	14.1	14.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)