

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: P312749

Luminaire Tested: **22FCZ2-20HE-UNV-L83050-CA125-W2A-U-5000K**

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: P312749
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: 22FCZ2-20HE-UNV-L83050-CA125-W2A-U-5000K
Description: 2'X2' TROFFER LED MODULE, RIBBED LENS, 0.125" ACRYLIC SHEET
Light Source: (168) 5000K 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: 2055.0 lumens
Efficiency: N/A
Efficacy: 117.4 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

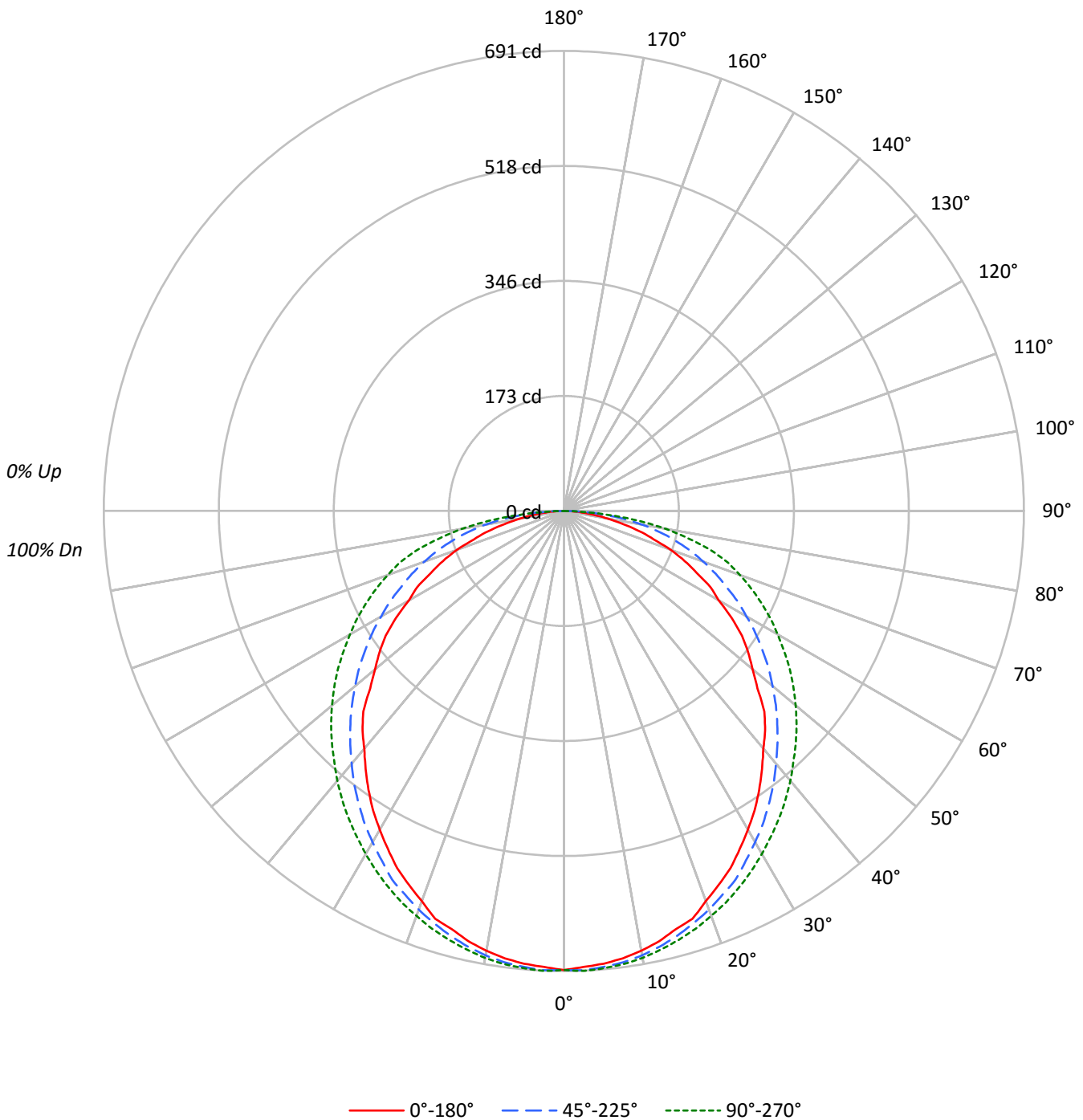
Input Watts (W): 17.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1855	1855	1855
5°	1844	1857	1863
10°	1833	1852	1862
15°	1811	1839	1858
20°	1786	1825	1853
25°	1758	1814	1852
30°	1718	1785	1849
35°	1680	1764	1851
40°	1638	1741	1859
45°	1621	1725	1875
50°	1548	1713	1902
55°	1532	1707	1943
60°	1445	1704	1996
65°	1403	1716	2085
70°	1346	1757	2213
75°	1227	1810	2383
80°	1052	1875	2408
85°	849	1791	2066



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	65.2	3.2
10°-20°	186.1	9.1
20°-30°	280.1	13.6
30°-40°	336.2	16.4
40°-50°	351.4	17.1
50°-60°	327.5	15.9
60°-70°	268.6	13.1
70°-80°	181.0	8.8
80°-90°	58.9	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°	531.5	25.9
0°-40°	867.7	42.2
0°-60°	1546.5	75.3
0°-90°	2055.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2055.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	690	690	690	690	690	
5°	683	685	688	688	690	65
15°	650	654	660	666	667	184
25°	592	596	611	620	624	272
35°	511	518	537	556	564	320
45°	426	429	453	481	493	325
55°	326	332	364	398	414	289
65°	220	230	270	309	328	219
75°	118	131	174	213	229	124
85°	28	39	58	68	67	33
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	689.5	689.5	689.5	689.5	689.5
2.5°	685.5	687.5	690.5	691.4	691.4
5°	682.6	684.6	687.5	688.5	689.5
7.5°	677.7	679.6	683.6	685.5	686.5
10°	670.8	672.7	677.7	680.6	681.6
12.5°	661.9	663.9	669.8	673.7	674.7
15°	650.1	654.1	660.0	665.9	666.8
17.5°	642.3	641.3	649.1	656.0	658.0
20°	623.6	628.5	637.3	645.2	647.2
22.5°	607.8	611.8	623.6	632.4	636.4
25°	592.1	596.0	610.8	619.6	623.6
27.5°	572.4	578.3	592.1	604.9	609.8
30°	552.8	558.7	574.4	589.1	595.0
32.5°	533.1	540.0	556.7	572.4	579.3
35°	511.4	518.3	537.0	555.7	563.6
37.5°	488.8	497.7	517.3	538.0	546.9
40°	466.2	475.1	495.7	519.3	529.2
42.5°	447.5	451.5	475.1	500.6	510.5
45°	425.9	428.8	453.4	481.0	492.8
47.5°	394.4	405.2	431.8	462.3	474.1
50°	369.8	381.6	409.2	441.6	454.4
52.5°	349.2	357.0	387.5	420.0	434.7
55°	326.5	332.4	363.9	398.3	414.1
57.5°	299.0	309.8	341.3	376.7	392.4
60°	268.5	282.3	316.7	355.1	370.8
62.5°	248.8	256.7	294.1	332.4	350.1
65°	220.3	230.2	269.5	308.8	327.5
67.5°	196.7	206.5	246.9	286.2	304.9
70°	171.1	181.0	223.3	262.6	281.3
72.5°	141.6	155.4	199.7	239.0	258.7
75°	118.0	130.8	174.1	213.4	229.2
77.5°	91.5	108.2	148.5	181.0	192.8
80°	67.9	84.6	121.0	144.6	155.4
82.5°	46.2	62.9	90.5	108.2	114.1
85°	27.5	39.3	58.0	67.9	66.9
87.5°	12.8	16.7	23.6	23.6	22.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)