

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: P308639

Luminaire Tested: **22FCZ2-20HE-UNV-L82765-CP250-W2A-U-4000K**

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: P308639
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-L82765-CP250-W2A-U-4000K
Description: 2'X2' TROFFER LED MODULE, RIBBED 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: 1802.0 lumens
Efficiency: N/A
Efficacy: 106.6 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

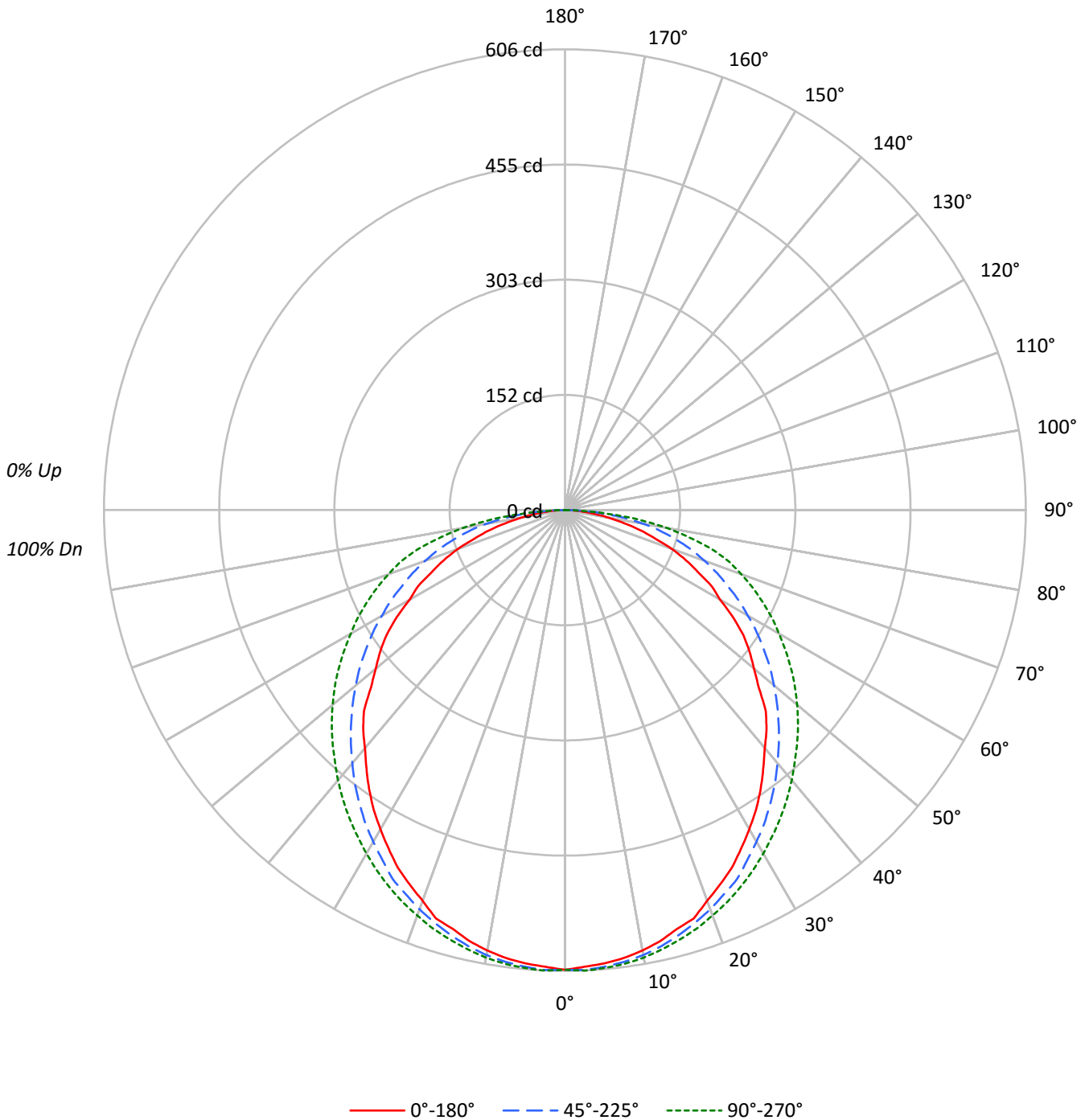
Input Watts (W): 16.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1627	1627	1627
5°	1617	1629	1633
10°	1607	1624	1633
15°	1588	1612	1629
20°	1566	1601	1625
25°	1542	1590	1624
30°	1506	1565	1621
35°	1473	1547	1623
40°	1436	1527	1630
45°	1421	1513	1644
50°	1358	1502	1668
55°	1343	1497	1704
60°	1267	1495	1750
65°	1230	1505	1829
70°	1181	1541	1941
75°	1076	1588	2090
80°	922	1644	2112
85°	744	1572	1809



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	57.2	3.2
10°-20°	163.2	9.1
20°-30°	245.6	13.6
30°-40°	294.8	16.4
40°-50°	308.1	17.1
50°-60°	287.1	15.9
60°-70°	235.5	13.1
70°-80°	158.7	8.8
80°-90°	51.7	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°	466.0	25.9
0°-40°	760.8	42.2
0°-60°	1356.1	75.3
0°-90°	1802.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1802.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	605	605	605	605	605	
5°	598	600	603	604	605	57
15°	570	574	579	584	585	161
25°	519	523	536	543	547	239
35°	448	454	471	487	494	280
45°	373	376	398	422	432	285
55°	286	292	319	349	363	254
65°	193	202	236	271	287	192
75°	104	115	153	187	201	109
85°	24	34	51	60	59	29
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	604.6	604.6	604.6	604.6	604.6
2.5°	601.1	602.9	605.4	606.3	606.3
5°	598.5	600.3	602.9	603.7	604.6
7.5°	594.2	596.0	599.4	601.1	602.0
10°	588.2	589.9	594.2	596.8	597.7
12.5°	580.4	582.2	587.3	590.8	591.6
15°	570.1	573.5	578.7	583.9	584.7
17.5°	563.2	562.3	569.2	575.3	577.0
20°	546.8	551.1	558.9	565.8	567.5
22.5°	533.0	536.5	546.8	554.6	558.0
25°	519.2	522.7	535.6	543.4	546.8
27.5°	502.0	507.1	519.2	530.4	534.7
30°	484.7	489.9	503.7	516.6	521.8
32.5°	467.5	473.5	488.2	502.0	508.0
35°	448.5	454.5	470.9	487.3	494.2
37.5°	428.6	436.4	453.7	471.8	479.5
40°	408.8	416.6	434.7	455.4	464.0
42.5°	392.4	395.9	416.6	439.0	447.6
45°	373.4	376.0	397.6	421.7	432.1
47.5°	345.8	355.3	378.6	405.4	415.7
50°	324.3	334.6	358.8	387.2	398.5
52.5°	306.2	313.1	339.8	368.3	381.2
55°	286.3	291.5	319.1	349.3	363.1
57.5°	262.2	271.7	299.3	330.3	344.1
60°	235.5	247.5	277.7	311.3	325.1
62.5°	218.2	225.1	257.9	291.5	307.0
65°	193.2	201.8	236.3	270.8	287.2
67.5°	172.5	181.1	216.5	251.0	267.4
70°	150.1	158.7	195.8	230.3	246.7
72.5°	124.2	136.3	175.1	209.6	226.8
75°	103.5	114.7	152.7	187.2	201.0
77.5°	80.2	94.9	130.2	158.7	169.0
80°	59.5	74.2	106.1	126.8	136.3
82.5°	40.5	55.2	79.3	94.9	100.0
85°	24.1	34.5	50.9	59.5	58.6
87.5°	11.2	14.7	20.7	20.7	19.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)