

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: P308908

Luminaire Tested: **22FCZ2-20HE-UNV-L82765-S-CP250-W2A-U-3500K**

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: P308908
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-CP250-W2A-U-3500K
Description: 2'X2' TROFFER LED MODULE, SMOOTH 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: 1860.0 lumens
Efficiency: N/A
Efficacy: 110.7 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

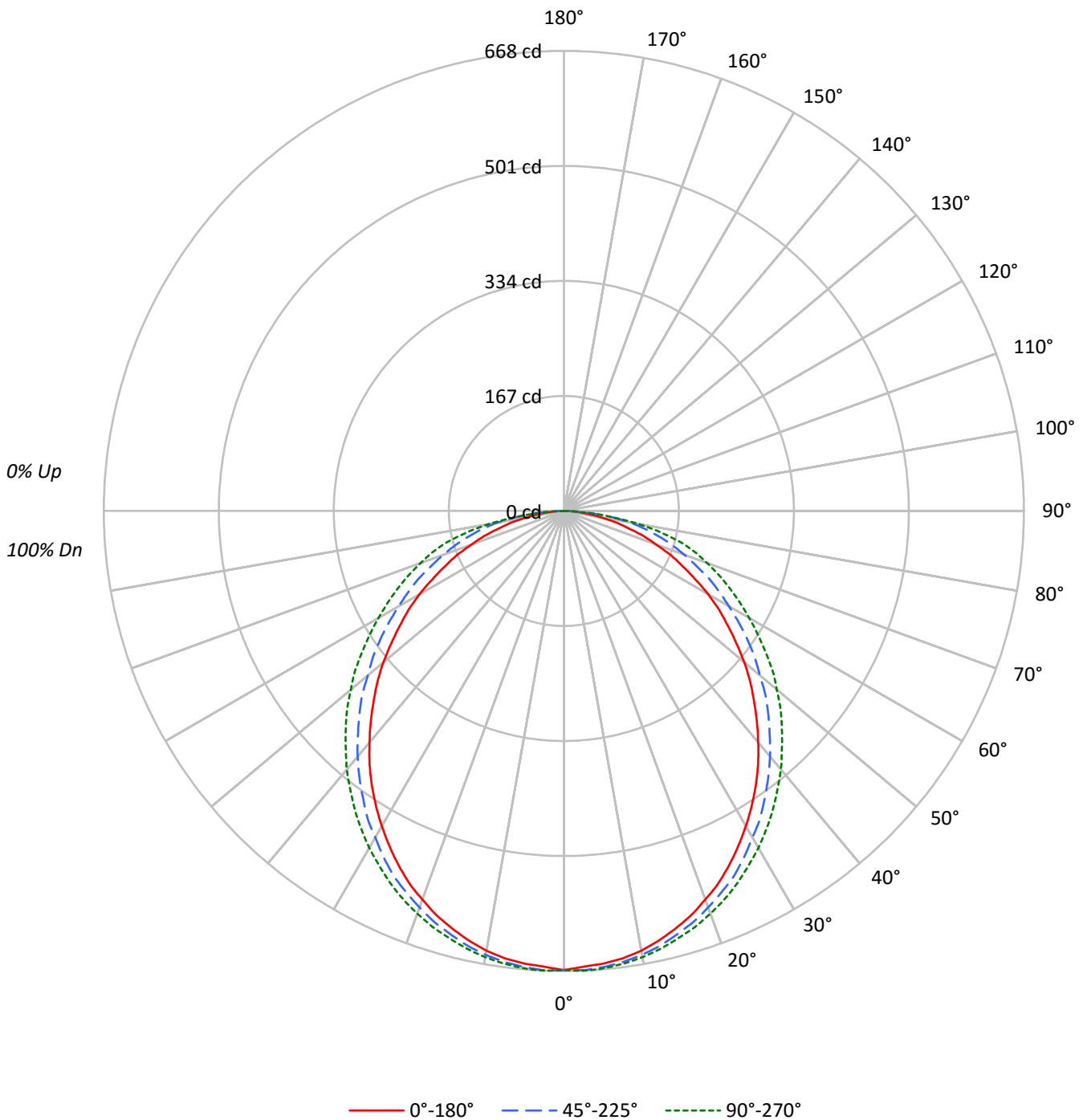
Input Watts (W): 16.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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CATALOG NUMBER: 22FC22-20HE-UNV-L82765-S-CP250-W2A-U-3500K

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°	1794	1794	1794
5°	1782	1796	1800
10°	1771	1788	1797
15°	1748	1772	1789
20°	1720	1755	1782
25°	1685	1737	1770
30°	1642	1702	1756
35°	1597	1671	1739
40°	1542	1637	1722
45°	1486	1598	1704
50°	1431	1555	1689
55°	1364	1527	1677
60°	1303	1490	1672
65°	1216	1481	1691
70°	1120	1468	1741
75°	1011	1489	1832
80°	874	1533	1722
85°	722	1288	1288



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	63.0	3.4
10°-20°	179.4	9.6
20°-30°	268.4	14.4
30°-40°	317.8	17.1
40°-50°	323.9	17.4
50°-60°	290.3	15.6
60°-70°	227.3	12.2
70°-80°	146.6	7.9
80°-90°	43.3	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°	510.8	27.5
0°-40°	828.6	44.5
0°-60°	1442.8	77.6
0°-90°	1860.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1860.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	666	666	666	666	666	
5°	660	661	665	666	666	63
15°	627	631	636	641	642	177
25°	568	573	585	593	596	261
35°	486	492	509	524	529	304
45°	390	399	420	442	448	302
55°	291	300	325	348	358	261
65°	191	202	233	255	266	190
75°	97	112	143	168	176	104
85°	23	32	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°	666.5	666.5	666.5	666.5	666.5
2.5°	662.2	663.9	667.4	668.2	668.2
5°	659.6	661.3	664.8	665.6	666.5
7.5°	655.2	656.1	660.4	662.2	663.0
10°	648.3	650.0	654.3	656.9	657.8
12.5°	638.7	641.3	646.5	650.0	650.9
15°	627.4	630.9	636.1	641.3	642.2
17.5°	615.3	618.8	625.7	631.8	633.5
20°	600.5	604.9	612.7	619.6	622.2
22.5°	585.8	589.3	598.8	607.5	610.1
25°	567.6	572.8	584.9	592.7	596.2
27.5°	548.5	554.5	566.7	577.1	580.6
30°	528.5	534.6	547.6	560.6	565.0
32.5°	507.7	514.6	530.2	543.3	547.6
35°	486.0	492.1	508.6	524.2	529.4
37.5°	463.4	468.6	487.7	504.2	509.4
40°	439.1	446.1	466.0	485.1	490.3
42.5°	414.8	422.6	442.6	463.4	468.6
45°	390.5	399.2	420.0	441.7	447.8
47.5°	367.1	374.0	397.5	418.3	427.0
50°	341.9	348.9	371.4	394.9	403.5
52.5°	315.9	325.4	349.7	372.3	382.7
55°	290.7	300.3	325.4	348.0	357.5
57.5°	267.3	275.1	301.1	324.6	334.1
60°	242.1	249.1	276.8	302.0	310.7
62.5°	215.2	225.6	254.3	277.7	288.1
65°	190.9	202.2	232.6	255.1	265.6
67.5°	168.4	178.8	208.3	232.6	243.9
70°	142.3	156.2	186.6	210.9	221.3
72.5°	121.5	133.6	164.9	189.2	200.5
75°	97.2	112.0	143.2	167.5	176.2
77.5°	77.2	92.0	121.5	140.6	144.9
80°	56.4	71.2	98.9	108.5	111.1
82.5°	38.2	52.1	71.2	73.8	74.6
85°	23.4	32.1	41.7	41.7	41.7
87.5°	11.3	13.0	14.8	13.9	13.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)