

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: P308638

Luminaire Tested: **22FCZ2-20HE-UNV-L82765-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: P308638
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-3500K
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: 1764.0 lumens
Efficiency: N/A
Efficacy: 105.0 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

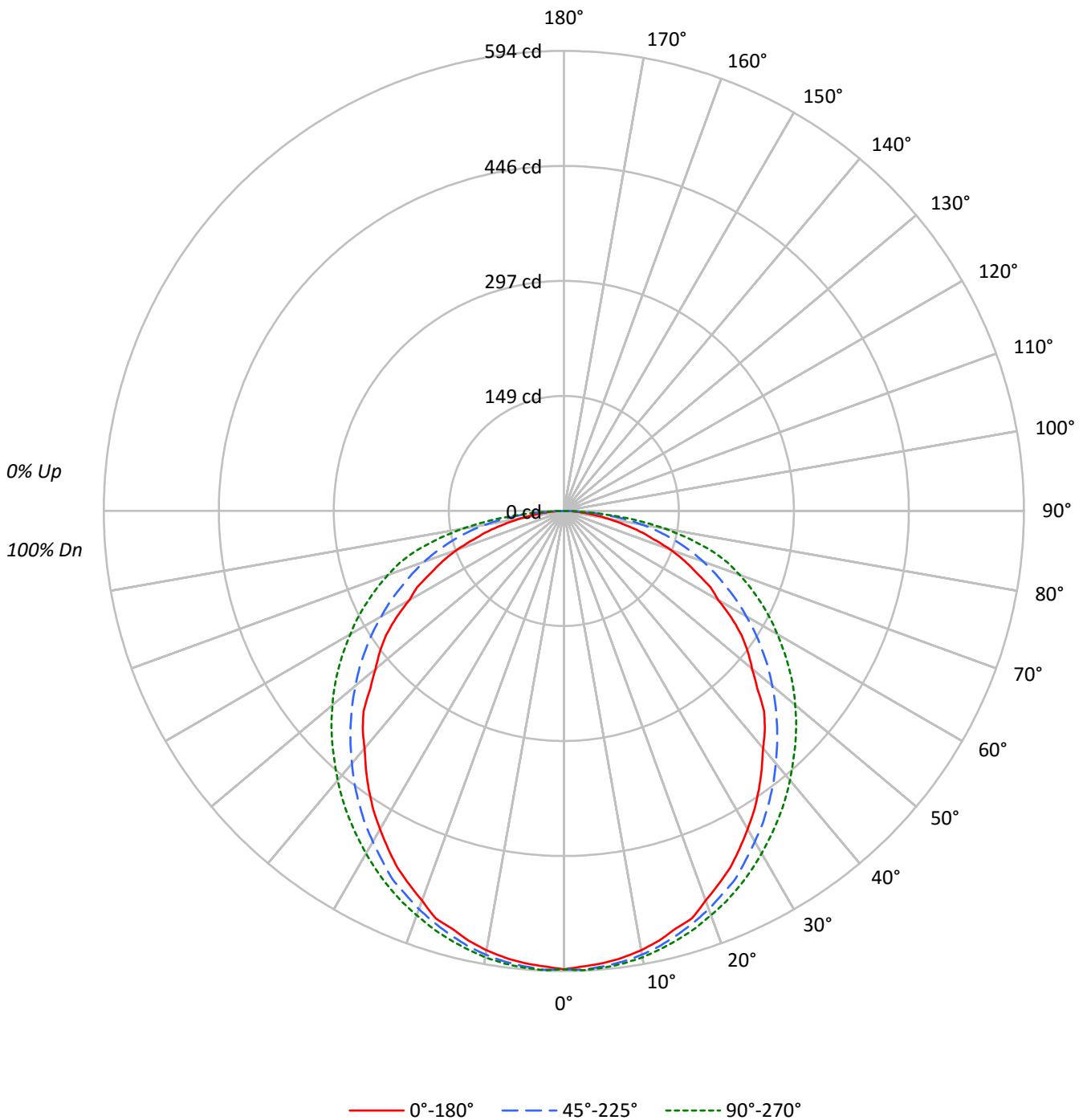
Input Watts (W): 16.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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CATALOG NUMBER: 22FC22-20HE-UNV-L82765-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	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°	1593	1593	1593
5°	1583	1594	1599
10°	1573	1589	1599
15°	1555	1578	1595
20°	1533	1567	1591
25°	1509	1557	1589
30°	1474	1532	1587
35°	1442	1514	1589
40°	1406	1495	1596
45°	1391	1481	1610
50°	1329	1470	1633
55°	1315	1466	1667
60°	1241	1463	1713
65°	1204	1473	1790
70°	1156	1508	1900
75°	1053	1553	2045
80°	903	1609	2067
85°	729	1538	1772



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	56.0	3.2
10°-20°	159.8	9.1
20°-30°	240.4	13.6
30°-40°	288.6	16.4
40°-50°	301.6	17.1
50°-60°	281.1	15.9
60°-70°	230.6	13.1
70°-80°	155.3	8.8
80°-90°	50.6	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°	456.2	25.9
0°-40°	744.8	42.2
0°-60°	1327.5	75.3
0°-90°	1764.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1764.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	592	592	592	592	592	
5°	586	588	590	591	592	56
15°	558	561	566	572	572	158
25°	508	512	524	532	535	234
35°	439	445	461	477	484	274
45°	366	368	389	413	423	279
55°	280	285	312	342	355	248
65°	189	198	231	265	281	188
75°	101	112	149	183	197	107
85°	24	34	50	58	57	28
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	591.8	591.8	591.8	591.8	591.8
2.5°	588.5	590.1	592.7	593.5	593.5
5°	585.9	587.6	590.1	591.0	591.8
7.5°	581.7	583.4	586.8	588.5	589.3
10°	575.8	577.5	581.7	584.2	585.1
12.5°	568.2	569.9	575.0	578.3	579.2
15°	558.1	561.4	566.5	571.6	572.4
17.5°	551.3	550.5	557.2	563.1	564.8
20°	535.3	539.5	547.1	553.8	555.5
22.5°	521.8	525.1	535.3	542.9	546.2
25°	508.3	511.6	524.3	531.9	535.3
27.5°	491.4	496.4	508.3	519.2	523.5
30°	474.5	479.5	493.1	505.7	510.8
32.5°	457.6	463.5	477.9	491.4	497.3
35°	439.0	444.9	461.0	477.0	483.8
37.5°	419.6	427.2	444.1	461.8	469.4
40°	400.2	407.8	425.5	445.8	454.2
42.5°	384.1	387.5	407.8	429.7	438.2
45°	365.6	368.1	389.2	412.9	423.0
47.5°	338.6	347.8	370.6	396.8	406.9
50°	317.4	327.6	351.2	379.1	390.1
52.5°	299.7	306.5	332.6	360.5	373.2
55°	280.3	285.4	312.4	341.9	355.4
57.5°	256.7	265.9	293.0	323.4	336.9
60°	230.5	242.3	271.9	304.8	318.3
62.5°	213.6	220.4	252.4	285.4	300.6
65°	189.1	197.6	231.3	265.1	281.1
67.5°	168.9	177.3	211.9	245.7	261.7
70°	146.9	155.3	191.7	225.4	241.5
72.5°	121.6	133.4	171.4	205.2	222.0
75°	101.3	112.3	149.4	183.2	196.7
77.5°	78.5	92.9	127.5	155.3	165.5
80°	58.3	72.6	103.8	124.1	133.4
82.5°	39.7	54.0	77.7	92.9	97.9
85°	23.6	33.8	49.8	58.3	57.4
87.5°	11.0	14.4	20.3	20.3	19.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)