

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: P308610

Luminaire Tested: **22FCZ2-20HE-UNV-L82765-CA125-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: P308610
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-CA125-W2A-U-3000K
Description: 2'X2' TROFFER LED MODULE, RIBBED LENS, 0.125" ACRYLIC 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: 1830.0 lumens
Efficiency: N/A
Efficacy: 110.2 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

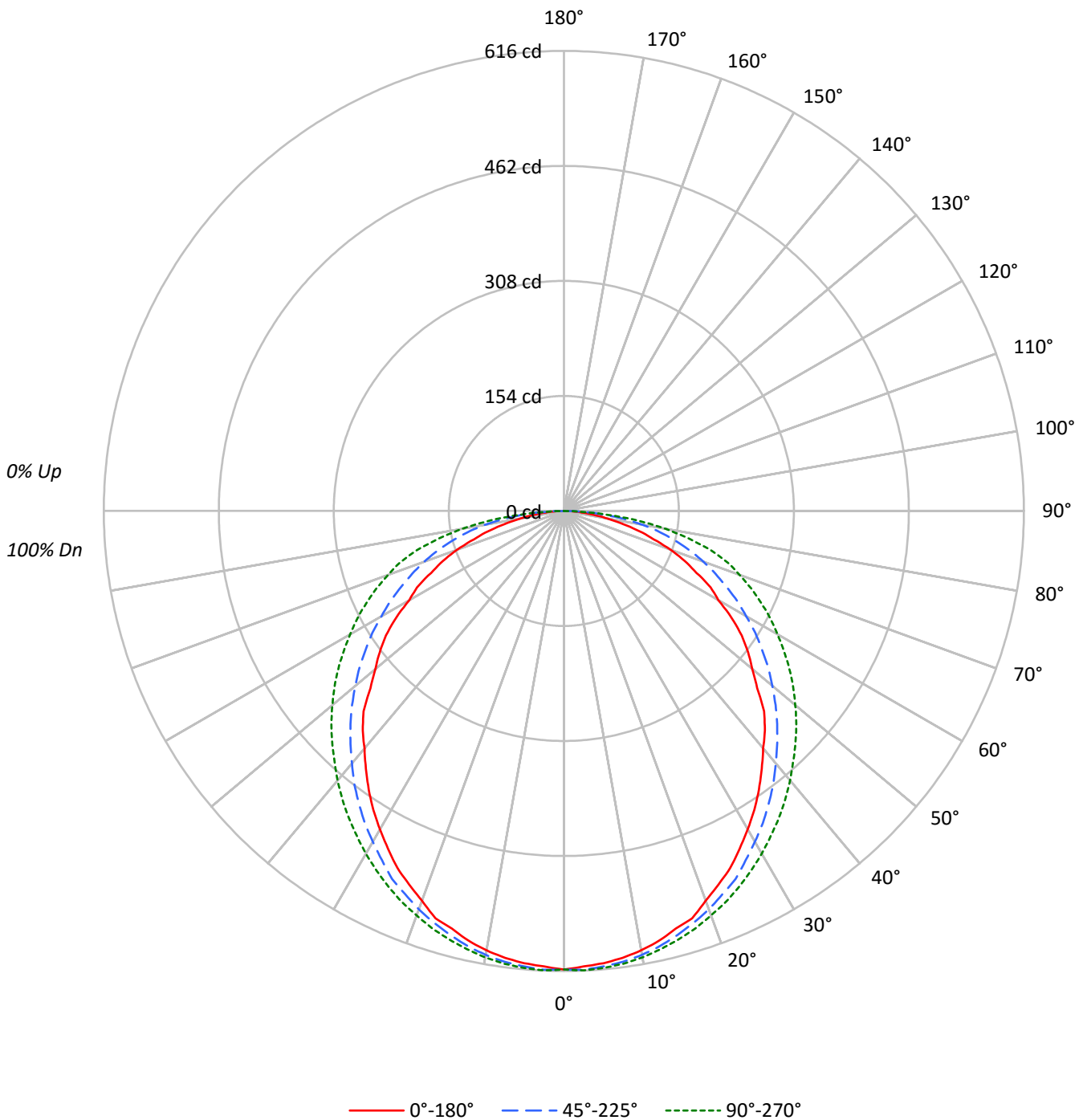
Input Watts (W): 16.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1652	1652	1652
5°	1642	1654	1659
10°	1632	1649	1659
15°	1613	1637	1654
20°	1590	1625	1650
25°	1566	1615	1649
30°	1529	1589	1647
35°	1496	1571	1649
40°	1459	1551	1655
45°	1443	1537	1670
50°	1379	1526	1694
55°	1364	1521	1730
60°	1287	1518	1777
65°	1249	1528	1857
70°	1199	1564	1971
75°	1093	1612	2122
80°	936	1669	2145
85°	756	1596	1840



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	58.1	3.2
10°-20°	165.7	9.1
20°-30°	249.4	13.6
30°-40°	299.4	16.4
40°-50°	312.9	17.1
50°-60°	291.6	15.9
60°-70°	239.2	13.1
70°-80°	161.2	8.8
80°-90°	52.5	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°	473.3	25.9
0°-40°	772.7	42.2
0°-60°	1377.2	75.3
0°-90°	1830.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1830.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	614	614	614	614	614	
5°	608	610	612	613	614	58
15°	579	582	588	593	594	164
25°	527	531	544	552	555	242
35°	455	462	478	495	502	285
45°	379	382	404	428	439	290
55°	291	296	324	355	369	258
65°	196	205	240	275	292	195
75°	105	116	155	190	204	110
85°	24	35	52	60	60	29
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	614.0	614.0	614.0	614.0	614.0
2.5°	610.5	612.2	614.9	615.7	615.7
5°	607.8	609.6	612.2	613.1	614.0
7.5°	603.5	605.2	608.7	610.5	611.4
10°	597.3	599.1	603.5	606.1	607.0
12.5°	589.5	591.2	596.5	600.0	600.8
15°	578.9	582.4	587.7	593.0	593.8
17.5°	571.9	571.1	578.1	584.2	586.0
20°	555.3	559.7	567.6	574.6	576.3
22.5°	541.3	544.8	555.3	563.2	566.7
25°	527.3	530.8	543.9	551.8	555.3
27.5°	509.8	515.0	527.3	538.7	543.0
30°	492.2	497.5	511.5	524.6	529.9
32.5°	474.7	480.8	495.7	509.8	515.9
35°	455.4	461.6	478.2	494.9	501.9
37.5°	435.3	443.2	460.7	479.1	487.0
40°	415.2	423.0	441.4	462.5	471.2
42.5°	398.5	402.0	423.0	445.8	454.6
45°	379.2	381.9	403.8	428.3	438.8
47.5°	351.2	360.9	384.5	411.7	422.2
50°	329.3	339.8	364.4	393.3	404.6
52.5°	310.9	317.9	345.1	374.0	387.1
55°	290.8	296.0	324.1	354.7	368.7
57.5°	266.3	275.9	303.9	335.5	349.5
60°	239.1	251.4	282.0	316.2	330.2
62.5°	221.6	228.6	261.9	296.0	311.8
65°	196.2	205.0	240.0	275.0	291.7
67.5°	175.2	183.9	219.8	254.9	271.5
70°	152.4	161.2	198.8	233.9	250.5
72.5°	126.1	138.4	177.8	212.8	230.4
75°	105.1	116.5	155.0	190.1	204.1
77.5°	81.5	96.3	132.3	161.2	171.7
80°	60.4	75.3	107.7	128.8	138.4
82.5°	41.2	56.1	80.6	96.3	101.6
85°	24.5	35.0	51.7	60.4	59.6
87.5°	11.4	14.9	21.0	21.0	20.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)