

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: P312472

Luminaire Tested: **22FCZ2-24HE-UNV-L83050-HRP-CA125-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: P312472
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-22)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 22FCZ2-24HE-UNV-L83050-HRP-CA125-W2A-U-4000K
Description: 2'X2' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" ACRYLIC SHEET
Light Source: (168) 4000K 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: 1849.0 lumens
Efficiency: N/A
Efficacy: 95.8 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

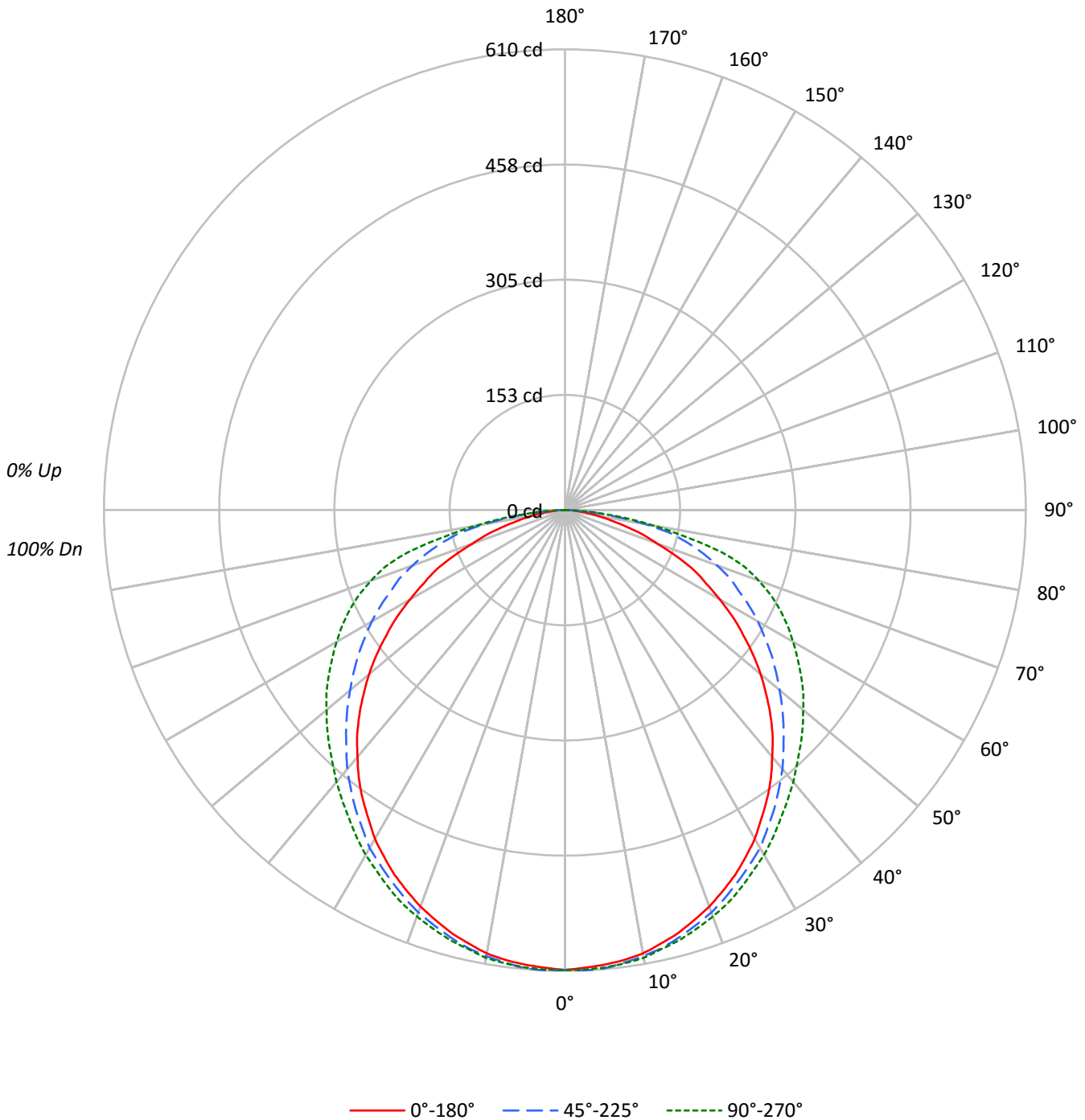
Input Watts (W): 19.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	101	96	93	96	93	90	92	90	87	89	87	84	82
2	98	89	82	76	95	87	80	75	84	78	73	80	75	71	77	73	70	68
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59	56
4	81	69	59	52	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	50	43	38	49	43	38	36
7	64	50	41	34	62	49	40	34	47	40	34	46	39	34	44	38	33	31
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	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1639	1639	1639
5°	1632	1645	1642
10°	1629	1638	1645
15°	1615	1631	1641
20°	1600	1623	1640
25°	1583	1610	1638
30°	1562	1606	1638
35°	1533	1586	1636
40°	1500	1573	1651
45°	1465	1558	1678
50°	1416	1553	1724
55°	1352	1565	1789
60°	1274	1588	1877
65°	1203	1619	2005
70°	1028	1688	2147
75°	861	1758	2231
80°	705	1698	1861
85°	611	1260	1368



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	57.7	3.1
10°-20°	165.1	8.9
20°-30°	250.2	13.5
30°-40°	302.1	16.3
40°-50°	317.4	17.2
50°-60°	298.6	16.2
60°-70°	249.0	13.5
70°-80°	165.0	8.9
80°-90°	44.0	2.4
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°	472.9	25.6
0°-40°	775.0	41.9
0°-60°	1391.0	75.2
0°-90°	1849.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1849.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	609	609	609	609	609	
5°	604	605	609	609	608	57
15°	580	582	586	588	589	163
25°	533	536	542	549	552	245
35°	467	471	483	493	498	292
45°	385	391	409	430	441	296
55°	288	301	334	367	381	258
65°	189	205	254	296	315	184
75°	83	116	169	204	215	90
85°	20	30	41	44	44	23
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	608.9	608.9	608.9	608.9	608.9
2.5°	606.5	607.7	610.0	610.0	608.9
5°	604.2	605.4	608.9	608.9	607.7
7.5°	600.7	601.9	604.2	606.5	605.4
10°	596.0	597.2	599.5	601.9	601.9
12.5°	587.9	589.0	593.7	594.9	594.9
15°	579.7	582.0	585.5	587.9	589.0
17.5°	569.2	571.5	576.2	580.9	580.9
20°	558.7	561.0	566.9	571.5	572.7
22.5°	545.9	549.4	555.2	561.0	563.4
25°	533.0	536.5	542.4	549.4	551.7
27.5°	517.9	521.4	529.5	537.7	538.9
30°	502.7	506.2	516.7	523.7	527.2
32.5°	484.1	488.7	499.2	509.7	513.2
35°	466.6	471.2	482.9	493.4	498.0
37.5°	447.9	452.6	465.4	478.2	484.1
40°	426.9	432.7	447.9	461.9	470.1
42.5°	407.1	412.9	428.1	446.7	454.9
45°	384.9	390.7	409.4	430.4	440.9
47.5°	361.6	368.6	390.7	416.4	426.9
50°	338.3	346.4	370.9	400.1	411.7
52.5°	313.8	324.3	352.2	383.7	397.7
55°	288.1	300.9	333.6	367.4	381.4
57.5°	263.6	275.3	313.8	349.9	365.1
60°	236.8	251.9	295.1	332.4	348.8
62.5°	211.1	227.4	275.3	314.9	332.4
65°	189.0	205.3	254.3	296.3	314.9
67.5°	159.8	182.0	236.8	276.4	295.1
70°	130.6	161.0	214.6	255.4	272.9
72.5°	108.5	137.6	192.5	233.3	249.6
75°	82.8	115.5	169.1	204.1	214.6
77.5°	61.8	95.6	144.6	162.1	163.3
80°	45.5	73.5	109.6	115.5	120.1
82.5°	31.5	51.3	71.1	78.1	80.5
85°	19.8	30.3	40.8	44.3	44.3
87.5°	10.5	11.7	14.0	14.0	14.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)