

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: P312488

Luminaire Tested: **22FCZ2-24HE-UNV-L83050-HRP-CP250-W2A-U-4500K**

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: P312488
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-CP250-W2A-U-4500K
Description: 2'X2' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.250"
POLYCARB SHEET
Light Source: (168) 4500K 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: 1739.0 lumens
Efficiency: N/A
Efficacy: 87.8 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

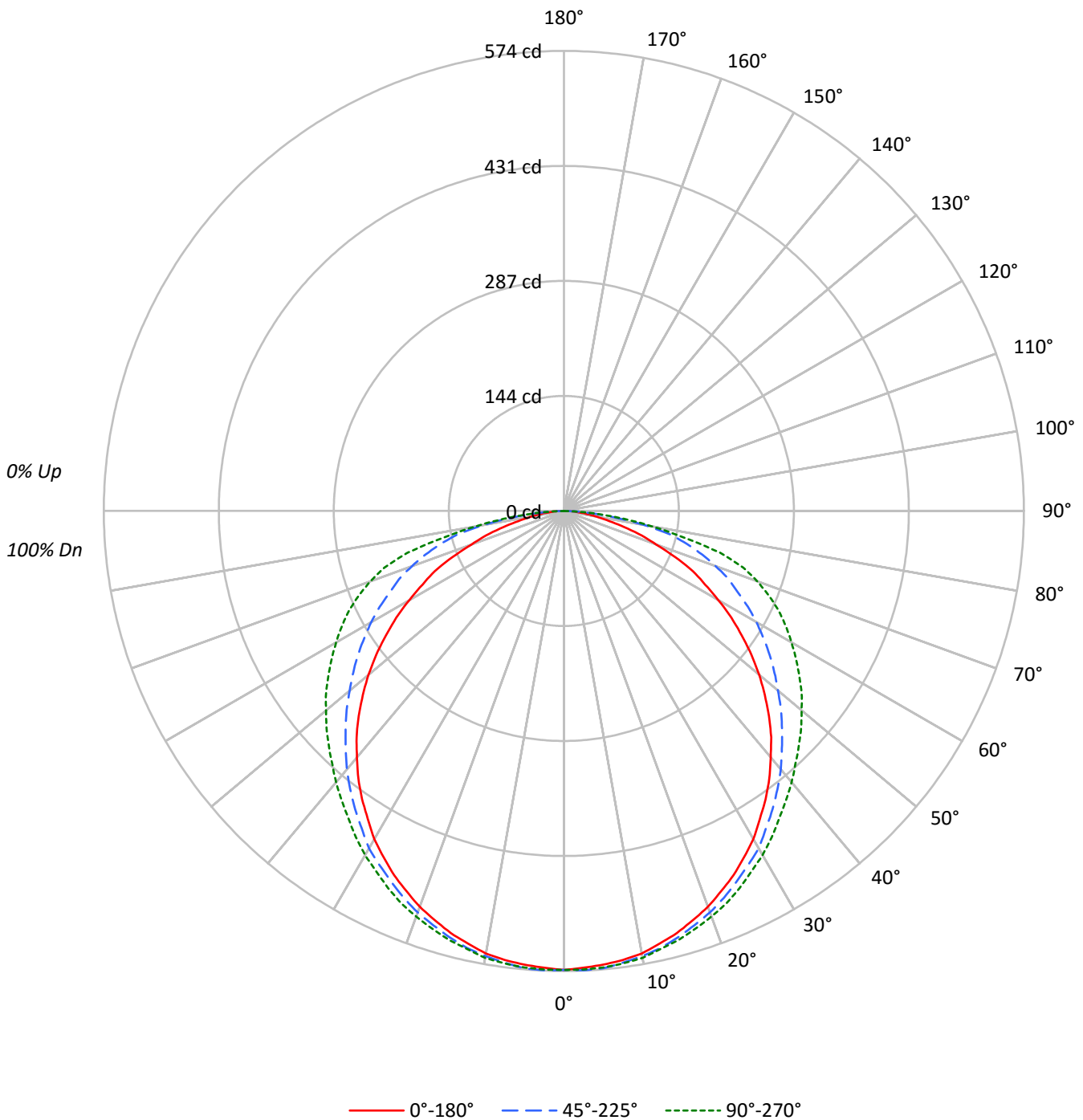
Input Watts (W): 19.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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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°	1541	1541	1541
5°	1535	1547	1544
10°	1532	1541	1547
15°	1519	1534	1543
20°	1505	1527	1542
25°	1488	1515	1541
30°	1469	1510	1541
35°	1441	1492	1539
40°	1410	1480	1553
45°	1378	1465	1578
50°	1332	1460	1621
55°	1271	1472	1683
60°	1199	1493	1765
65°	1131	1522	1886
70°	967	1588	2020
75°	810	1654	2098
80°	663	1598	1751
85°	574	1186	1288



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	54.3	3.1
10°-20°	155.2	8.9
20°-30°	235.3	13.5
30°-40°	284.1	16.3
40°-50°	298.5	17.2
50°-60°	280.9	16.2
60°-70°	234.2	13.5
70°-80°	155.2	8.9
80°-90°	41.4	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°	444.8	25.6
0°-40°	728.9	41.9
0°-60°	1308.3	75.2
0°-90°	1739.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1739.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	573	573	573	573	573	
5°	568	569	573	573	572	54
15°	545	547	551	553	554	154
25°	501	505	510	517	519	231
35°	439	443	454	464	468	274
45°	362	368	385	405	415	279
55°	271	283	314	346	359	242
65°	178	193	239	279	296	173
75°	78	109	159	192	202	85
85°	19	28	38	42	42	22
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	572.6	572.6	572.6	572.6	572.6
2.5°	570.4	571.5	573.7	573.7	572.6
5°	568.2	569.3	572.6	572.6	571.5
7.5°	565.0	566.1	568.2	570.4	569.3
10°	560.6	561.7	563.9	566.1	566.1
12.5°	552.9	554.0	558.4	559.5	559.5
15°	545.2	547.4	550.7	552.9	554.0
17.5°	535.3	537.5	541.9	546.3	546.3
20°	525.5	527.7	533.1	537.5	538.6
22.5°	513.4	516.7	522.2	527.7	529.9
25°	501.3	504.6	510.1	516.7	518.9
27.5°	487.1	490.4	498.0	505.7	506.8
30°	472.8	476.1	486.0	492.6	495.8
32.5°	455.3	459.6	469.5	479.4	482.7
35°	438.8	443.2	454.2	464.0	468.4
37.5°	421.2	425.6	437.7	449.8	455.3
40°	401.5	407.0	421.2	434.4	442.1
42.5°	382.9	388.3	402.6	420.2	427.8
45°	362.0	367.5	385.0	404.8	414.7
47.5°	340.1	346.7	367.5	391.6	401.5
50°	318.1	325.8	348.8	376.3	387.2
52.5°	295.1	305.0	331.3	360.9	374.1
55°	271.0	283.0	313.7	345.6	358.7
57.5°	247.9	258.9	295.1	329.1	343.4
60°	222.7	237.0	277.5	312.6	328.0
62.5°	198.6	213.9	258.9	296.2	312.6
65°	177.7	193.1	239.1	278.6	296.2
67.5°	150.3	171.1	222.7	260.0	277.5
70°	122.9	151.4	201.8	240.2	256.7
72.5°	102.0	129.4	181.0	219.4	234.8
75°	77.9	108.6	159.1	192.0	201.8
77.5°	58.1	90.0	136.0	152.5	153.6
80°	42.8	69.1	103.1	108.6	113.0
82.5°	29.6	48.3	66.9	73.5	75.7
85°	18.6	28.5	38.4	41.7	41.7
87.5°	9.9	11.0	13.2	13.2	13.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)