

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: P312510

Luminaire Tested: **22FCZ2-29HE-UNV-L83050-HRP-CP250-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: P312510
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: 22FCZ2-29HE-UNV-L83050-HRP-CP250-W2A-U-3000K
Description: 2'X2' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. 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: 1813.0 lumens
Efficiency: N/A
Efficacy: 80.9 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

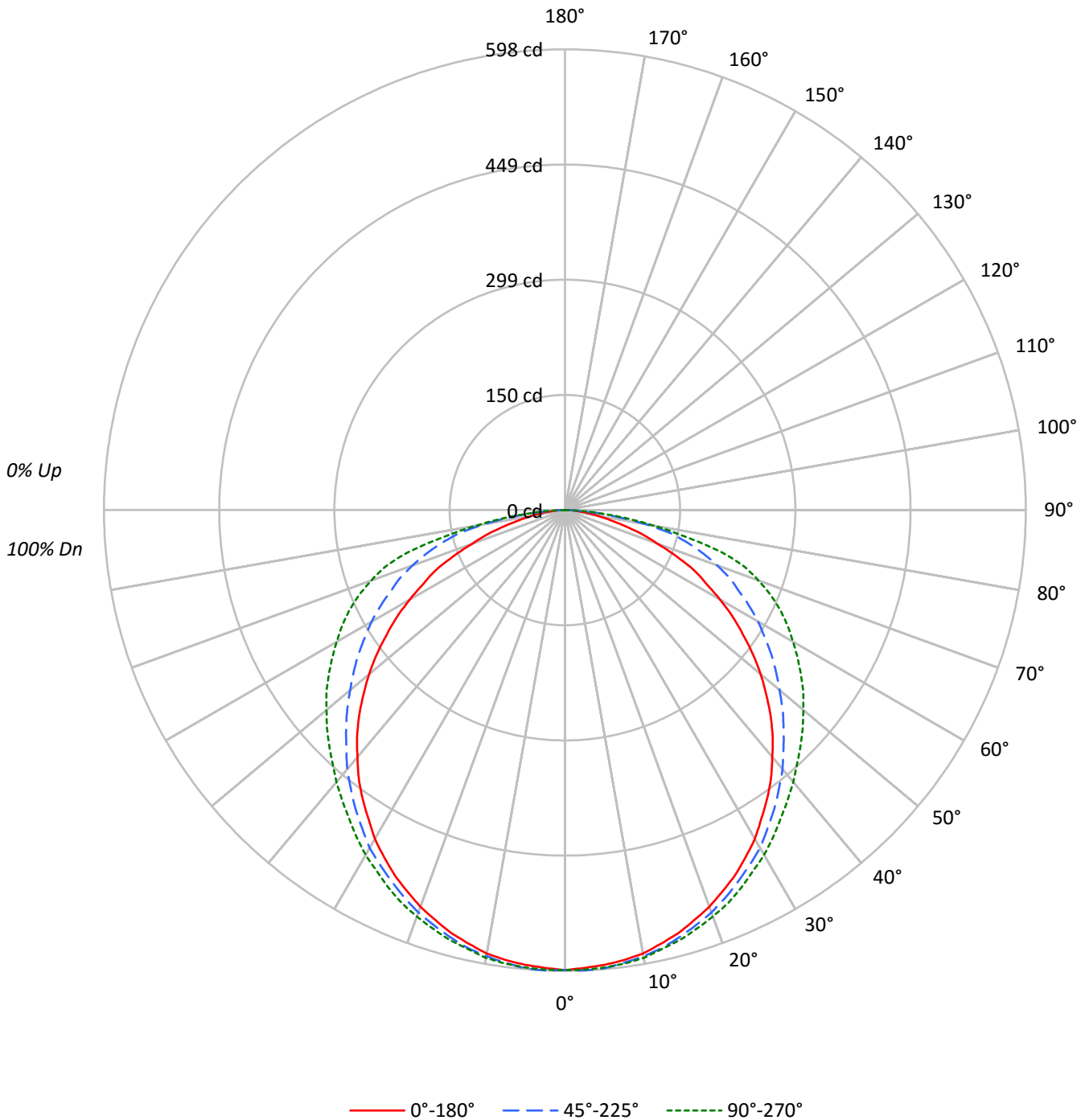
Input Watts (W): 22.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1607	1607	1607
5°	1600	1613	1610
10°	1597	1606	1612
15°	1584	1599	1609
20°	1569	1592	1608
25°	1552	1579	1606
30°	1532	1574	1606
35°	1503	1555	1604
40°	1470	1543	1619
45°	1436	1528	1645
50°	1389	1523	1690
55°	1325	1535	1755
60°	1250	1558	1841
65°	1180	1587	1966
70°	1008	1655	2105
75°	844	1724	2188
80°	691	1666	1826
85°	599	1235	1343



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	56.6	3.1
10°-20°	161.9	8.9
20°-30°	245.3	13.5
30°-40°	296.2	16.3
40°-50°	311.2	17.2
50°-60°	292.8	16.2
60°-70°	244.2	13.5
70°-80°	161.8	8.9
80°-90°	43.1	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°	463.7	25.6
0°-40°	759.9	41.9
0°-60°	1363.9	75.2
0°-90°	1813.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1813.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	597	597	597	597	597	
5°	592	594	597	597	596	56
15°	568	571	574	576	578	160
25°	523	526	532	539	541	241
35°	458	462	474	484	488	286
45°	377	383	401	422	432	291
55°	282	295	327	360	374	253
65°	185	201	249	290	309	180
75°	81	113	166	200	210	88
85°	19	30	40	44	44	23
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	597.0	597.0	597.0	597.0	597.0
2.5°	594.7	595.9	598.1	598.1	597.0
5°	592.4	593.6	597.0	597.0	595.9
7.5°	589.0	590.1	592.4	594.7	593.6
10°	584.4	585.6	587.9	590.1	590.1
12.5°	576.4	577.6	582.1	583.3	583.3
15°	568.4	570.7	574.1	576.4	577.6
17.5°	558.1	560.4	565.0	569.6	569.6
20°	547.8	550.1	555.8	560.4	561.5
22.5°	535.2	538.7	544.4	550.1	552.4
25°	522.7	526.1	531.8	538.7	541.0
27.5°	507.8	511.2	519.2	527.2	528.4
30°	492.9	496.4	506.6	513.5	516.9
32.5°	474.6	479.2	489.5	499.8	503.2
35°	457.5	462.0	473.5	483.8	488.4
37.5°	439.2	443.7	456.3	468.9	474.6
40°	418.6	424.3	439.2	452.9	460.9
42.5°	399.1	404.9	419.7	438.0	446.0
45°	377.4	383.1	401.4	422.0	432.3
47.5°	354.5	361.4	383.1	408.3	418.6
50°	331.7	339.7	363.7	392.3	403.7
52.5°	307.6	317.9	345.4	376.3	390.0
55°	282.5	295.1	327.1	360.3	374.0
57.5°	258.5	269.9	307.6	343.1	358.0
60°	232.2	247.0	289.4	325.9	342.0
62.5°	207.0	223.0	269.9	308.8	325.9
65°	185.3	201.3	249.3	290.5	308.8
67.5°	156.7	178.4	232.2	271.1	289.4
70°	128.1	157.8	210.4	250.5	267.6
72.5°	106.4	135.0	188.7	228.7	244.7
75°	81.2	113.2	165.8	200.1	210.4
77.5°	60.6	93.8	141.8	159.0	160.1
80°	44.6	72.1	107.5	113.2	117.8
82.5°	30.9	50.3	69.8	76.6	78.9
85°	19.4	29.7	40.0	43.5	43.5
87.5°	10.3	11.4	13.7	13.7	13.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)