

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: P312513

Luminaire Tested: **22FCZ2-29HE-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: P312513  
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-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**

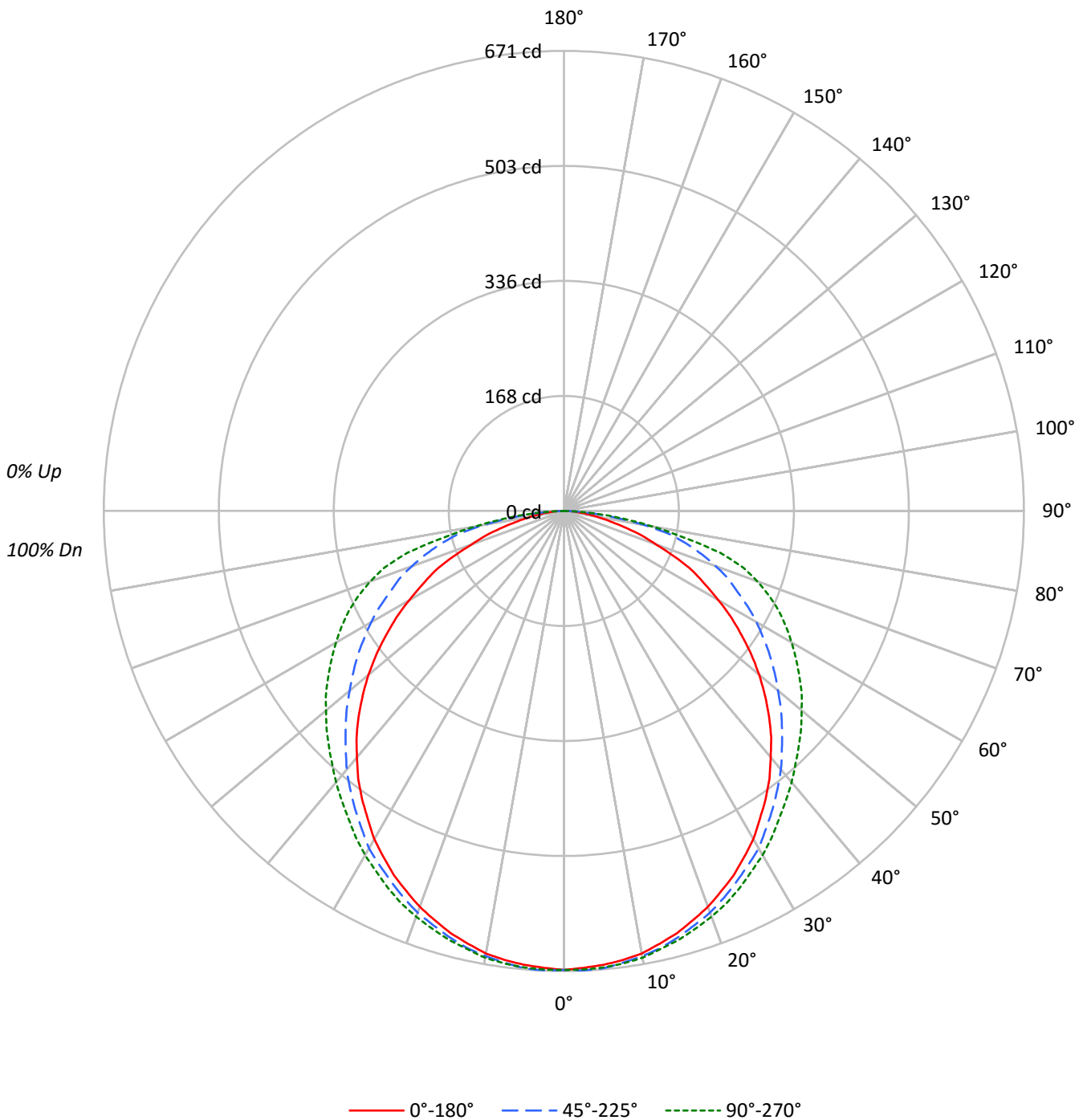
Lumens per Lamp: N/A  
Luminaire Lumens: 2033.0 lumens  
Efficiency: N/A  
Efficacy: 86.5 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.29 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 23.5  
Input Voltage (V): NR  
Input Current (Ain): NR  
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°	1801	1801	1801
5°	1794	1808	1805
10°	1791	1801	1808
15°	1776	1794	1804
20°	1759	1785	1803
25°	1740	1771	1801
30°	1717	1765	1801
35°	1685	1744	1799
40°	1649	1730	1815
45°	1611	1713	1845
50°	1557	1707	1895
55°	1486	1721	1968
60°	1401	1746	2064
65°	1323	1780	2205
70°	1130	1857	2361
75°	947	1934	2454
80°	775	1869	2047
85°	673	1386	1504



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	63.4	3.1
10°-20°	181.5	8.9
20°-30°	275.0	13.5
30°-40°	332.1	16.3
40°-50°	349.0	17.2
50°-60°	328.4	16.2
60°-70°	273.8	13.5
70°-80°	181.4	8.9
80°-90°	48.3	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°	520.0	25.6
0°-40°	852.1	41.9
0°-60°	1529.5	75.2
0°-90°	2033.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2033.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	669	669	669	669	669	
5°	664	666	669	669	668	63
15°	637	640	644	646	648	180
25°	586	590	596	604	607	270
35°	513	518	531	542	548	321
45°	423	430	450	473	485	326
55°	317	331	367	404	419	283
65°	208	226	280	326	346	202
75°	91	127	186	224	236	99
85°	22	33	45	49	49	25
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	669.4	669.4	669.4	669.4	669.4
2.5°	666.9	668.2	670.7	670.7	669.4
5°	664.3	665.6	669.4	669.4	668.2
7.5°	660.5	661.7	664.3	666.9	665.6
10°	655.3	656.6	659.2	661.7	661.7
12.5°	646.4	647.6	652.8	654.1	654.1
15°	637.4	639.9	643.8	646.4	647.6
17.5°	625.8	628.4	633.5	638.7	638.7
20°	614.3	616.9	623.3	628.4	629.7
22.5°	600.2	604.0	610.5	616.9	619.4
25°	586.1	589.9	596.3	604.0	606.6
27.5°	569.4	573.3	582.2	591.2	592.5
30°	552.7	556.6	568.1	575.8	579.7
32.5°	532.2	537.4	548.9	560.4	564.3
35°	513.0	518.1	530.9	542.5	547.6
37.5°	492.5	497.6	511.7	525.8	532.2
40°	469.4	475.8	492.5	507.9	516.8
42.5°	447.6	454.0	470.7	491.2	500.2
45°	423.2	429.6	450.1	473.2	484.8
47.5°	397.6	405.3	429.6	457.8	469.4
50°	371.9	380.9	407.8	439.9	452.7
52.5°	345.0	356.5	387.3	421.9	437.3
55°	316.8	330.9	366.8	404.0	419.4
57.5°	289.8	302.7	345.0	384.7	401.4
60°	260.3	277.0	324.5	365.5	383.5
62.5°	232.1	250.1	302.7	346.3	365.5
65°	207.8	225.7	279.6	325.7	346.3
67.5°	175.7	200.1	260.3	303.9	324.5
70°	143.6	177.0	236.0	280.9	300.1
72.5°	119.3	151.3	211.6	256.5	274.4
75°	91.1	127.0	186.0	224.4	236.0
77.5°	68.0	105.2	159.0	178.3	179.5
80°	50.0	80.8	120.6	127.0	132.1
82.5°	34.6	56.4	78.2	85.9	88.5
85°	21.8	33.3	44.9	48.7	48.7
87.5°	11.5	12.8	15.4	15.4	15.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)