

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: P312688

Luminaire Tested: **22FCZ2-34HE-UNV-L83050-RDP-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: P312688  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-24)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: 22FCZ2-34HE-UNV-L83050-RDP-CP250-W2A-U-4500K  
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 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: 2038.0 lumens  
Efficiency: N/A  
Efficacy: 70.3 lumens/watt  
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

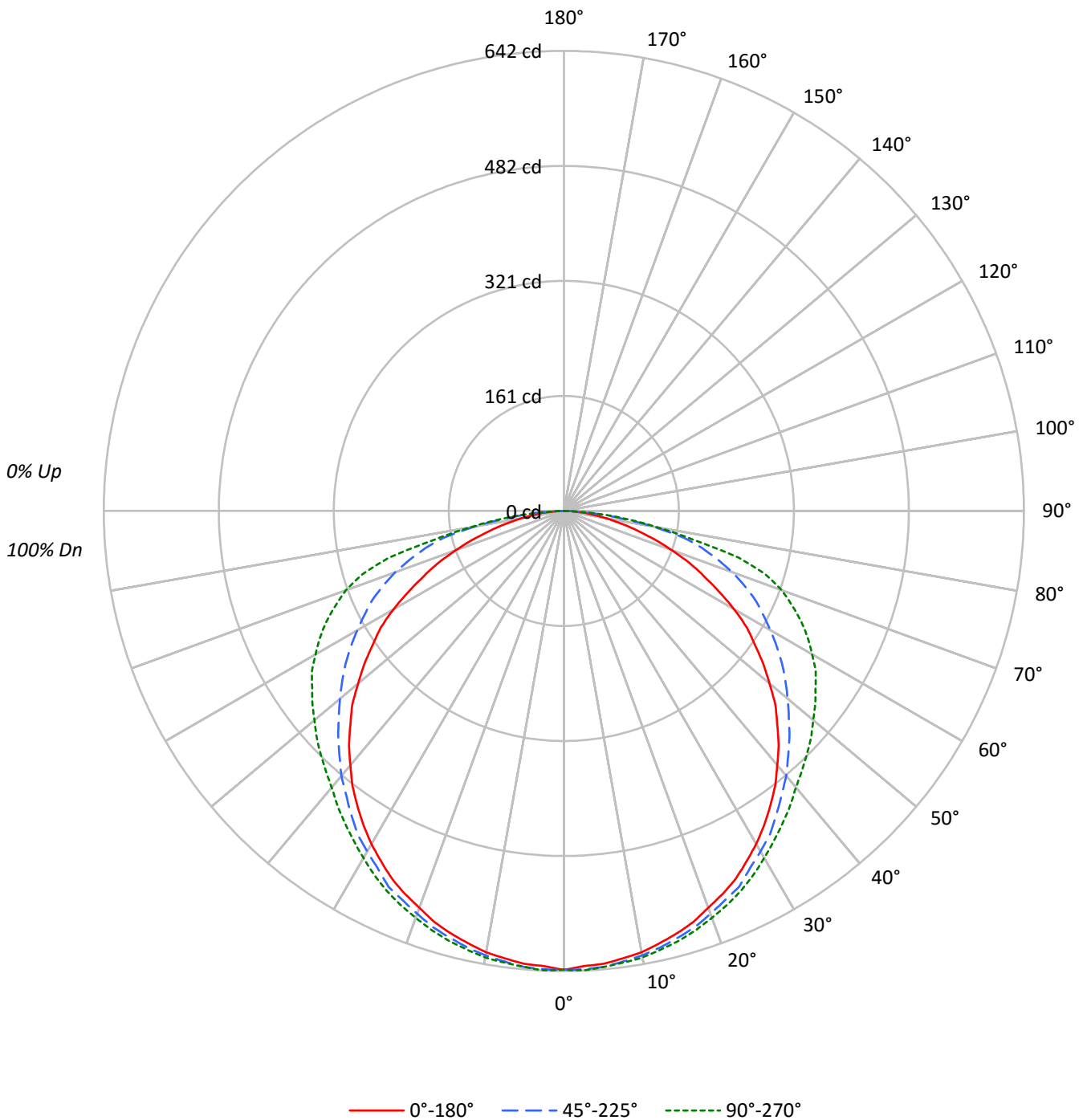
Input Watts (W): 29  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	92	89	92	89	86	88	86	84	82
2	97	88	81	75	95	86	80	74	83	77	72	80	75	71	76	72	69	67
3	88	77	68	61	86	75	67	61	72	65	60	70	64	59	67	62	58	55
4	80	68	59	51	78	66	58	51	64	56	50	61	55	50	59	54	49	47
5	74	60	51	44	72	59	50	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	44	38	51	43	38	50	43	37	48	42	37	35
7	63	49	40	33	61	48	39	33	47	39	33	45	38	33	44	37	33	31
8	59	45	36	30	57	44	35	30	43	35	29	41	34	29	40	34	29	27
9	55	41	32	27	53	40	32	27	39	32	26	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	1723	1723	1723
5°	1713	1725	1725
10°	1708	1721	1729
15°	1700	1717	1729
20°	1687	1713	1730
25°	1683	1718	1736
30°	1668	1705	1738
35°	1650	1699	1748
40°	1627	1696	1769
45°	1603	1695	1826
50°	1569	1707	1902
55°	1526	1744	2012
60°	1477	1791	2154
65°	1375	1880	2329
70°	1262	1970	2548
75°	1106	2073	2635
80°	953	1974	2067
85°	834	1436	1575



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	60.6	3.0
10°-20°	173.9	8.5
20°-30°	265.3	13.0
30°-40°	323.9	15.9
40°-50°	346.3	17.0
50°-60°	334.3	16.4
60°-70°	287.7	14.1
70°-80°	194.7	9.6
80°-90°	51.4	2.5
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°	499.7	24.5
0°-40°	823.6	40.4
0°-60°	1504.2	73.8
0°-90°	2038.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2038.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	640	640	640	640	640	
5°	634	636	639	639	639	60
15°	610	612	616	619	621	172
25°	567	570	579	582	585	261
35°	502	507	517	528	532	314
45°	421	429	445	468	480	325
55°	325	336	372	409	429	292
65°	216	237	295	342	366	215
75°	106	141	199	240	253	114
85°	27	38	46	48	51	30
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	640.2	640.2	640.2	640.2	640.2
2.5°	635.7	637.2	640.2	640.2	641.7
5°	634.2	635.7	638.7	638.7	638.7
7.5°	629.7	631.2	634.2	635.7	635.7
10°	625.2	626.7	629.7	631.2	632.7
12.5°	617.7	619.2	623.7	626.7	626.7
15°	610.2	611.7	616.2	619.2	620.7
17.5°	601.2	604.2	608.7	611.7	613.2
20°	589.2	592.2	598.2	602.7	604.2
22.5°	578.7	581.7	587.7	592.2	595.2
25°	566.7	569.7	578.7	581.7	584.7
27.5°	551.7	554.7	562.2	568.2	572.7
30°	536.7	539.7	548.7	556.2	559.2
32.5°	520.2	524.7	535.2	541.2	545.7
35°	502.2	506.7	517.2	527.7	532.2
37.5°	484.3	488.7	499.2	512.7	518.7
40°	463.3	469.3	482.8	500.7	503.7
42.5°	443.8	451.3	463.3	484.3	491.7
45°	421.3	428.8	445.3	467.8	479.8
47.5°	400.3	407.8	425.8	452.8	467.8
50°	374.8	385.3	407.8	439.3	454.3
52.5°	350.8	359.8	389.8	424.3	442.3
55°	325.3	335.8	371.8	409.3	428.8
57.5°	302.8	311.8	352.3	394.3	416.8
60°	274.4	286.4	332.8	377.8	400.3
62.5°	244.4	262.4	313.3	359.8	383.8
65°	215.9	236.9	295.3	341.8	365.8
67.5°	190.4	212.9	272.9	322.3	344.8
70°	160.4	188.9	250.4	298.3	323.8
72.5°	133.4	164.9	224.9	272.9	295.3
75°	106.4	140.9	199.4	239.9	253.4
77.5°	82.5	115.4	170.9	182.9	184.4
80°	61.5	91.5	127.4	128.9	133.4
82.5°	42.0	64.5	82.5	90.0	91.5
85°	27.0	37.5	46.5	48.0	51.0
87.5°	12.0	13.5	16.5	15.0	15.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)