

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: P309036

Luminaire Tested: **22FCZ2-34HE-UNV-L82765-S-CP187-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: P309036  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-23)  
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-L82765-S-CP187-W2A-U-4500K  
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.187" 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**

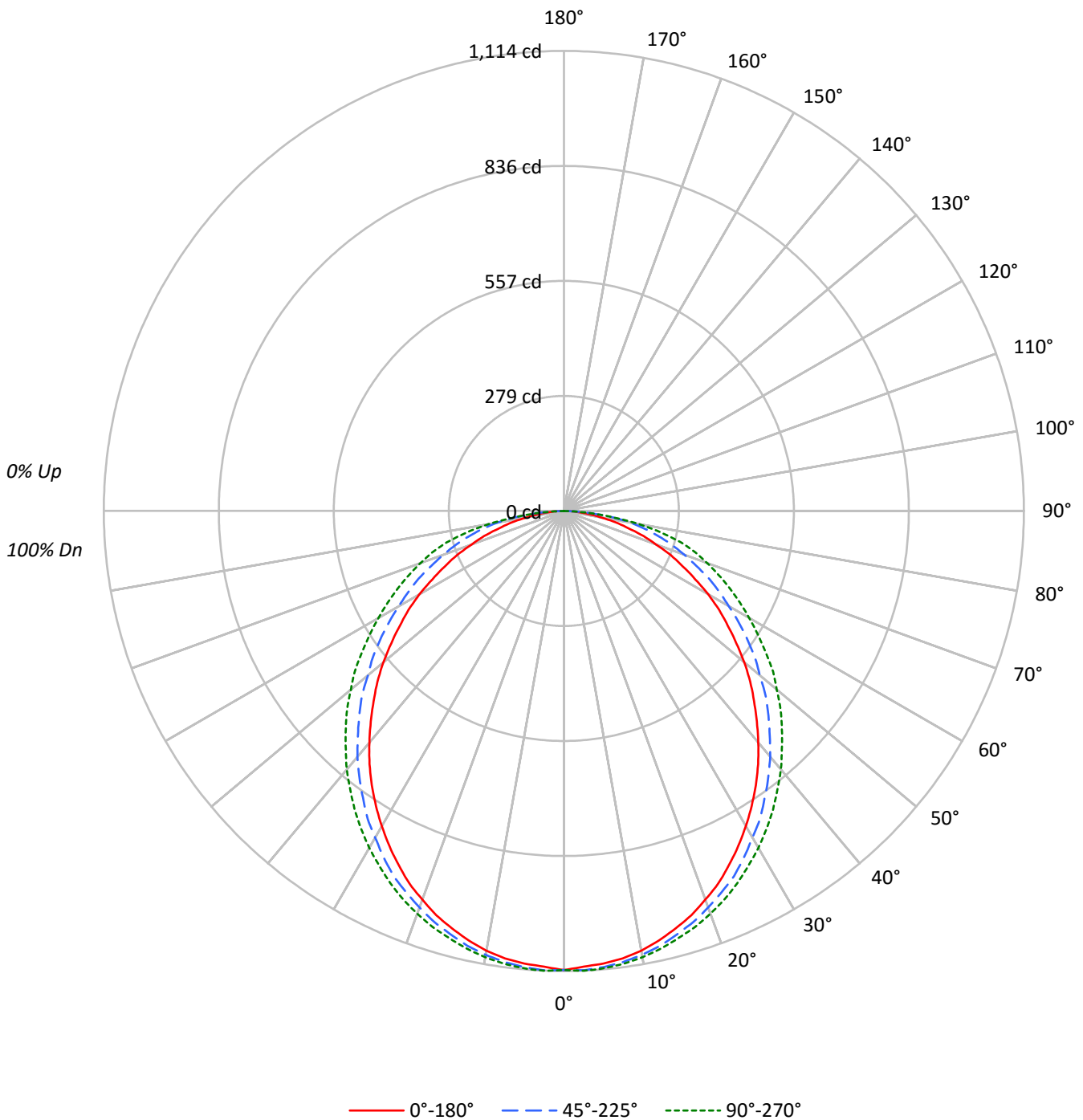
Lumens per Lamp: N/A  
Luminaire Lumens: 3102.0 lumens  
Efficiency: N/A  
Efficacy: 110.4 lumens/watt  
Spacing Criteria (0/90/45): 1.18 / 1.26 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 28.1  
Input Voltage (V): NR  
Input Current (A<sub>in</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	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83
2	98	90	83	77	96	88	82	76	84	79	74	81	77	73	78	74	71	69
3	90	79	71	64	87	77	70	63	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	69	60	54	66	59	53	64	57	52	61	56	52	49
5	75	62	53	47	73	61	53	46	59	52	46	57	51	45	55	50	45	43
6	70	56	47	41	68	55	47	41	53	46	40	52	45	40	50	44	39	37
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	28	27
10	53	40	32	26	51	39	31	26	38	31	26	37	31	26	36	30	26	24

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

	0°	45°	90°
0°	2991	2991	2991
5°	2971	2995	3002
10°	2954	2982	2998
15°	2915	2956	2984
20°	2868	2926	2972
25°	2810	2896	2952
30°	2739	2838	2928
35°	2663	2786	2900
40°	2572	2730	2872
45°	2479	2666	2842
50°	2387	2593	2817
55°	2275	2546	2798
60°	2173	2485	2788
65°	2027	2470	2820
70°	1868	2448	2904
75°	1685	2483	3055
80°	1458	2557	2872
85°	1207	2146	2146



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	105.1	3.4
10°-20°	299.1	9.6
20°-30°	447.6	14.4
30°-40°	530.1	17.1
40°-50°	540.2	17.4
50°-60°	484.2	15.6
60°-70°	379.1	12.2
70°-80°	244.4	7.9
80°-90°	72.2	2.3
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°	851.9	27.5
0°-40°	1381.9	44.5
0°-60°	2406.3	77.6
0°-90°	3102.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3102.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1112	1112	1112	1112	1112	
5°	1100	1103	1109	1110	1112	104
15°	1046	1052	1061	1070	1071	295
25°	946	955	976	988	994	436
35°	810	821	848	874	883	507
45°	651	666	700	737	747	503
55°	485	501	543	580	596	435
65°	318	337	388	426	443	316
75°	162	187	239	279	294	174
85°	39	54	70	70	70	46
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1111.5	1111.5	1111.5	1111.5	1111.5
2.5°	1104.3	1107.2	1113.0	1114.4	1114.4
5°	1100.0	1102.9	1108.6	1110.1	1111.5
7.5°	1092.7	1094.2	1101.4	1104.3	1105.8
10°	1081.1	1084.0	1091.3	1095.6	1097.1
12.5°	1065.2	1069.6	1078.3	1084.0	1085.5
15°	1046.4	1052.2	1060.9	1069.6	1071.0
17.5°	1026.2	1031.9	1043.5	1053.7	1056.5
20°	1001.5	1008.8	1021.8	1033.4	1037.7
22.5°	976.9	982.7	998.7	1013.1	1017.5
25°	946.5	955.2	975.5	988.5	994.3
27.5°	914.7	924.8	945.1	962.5	968.3
30°	881.4	891.6	913.3	935.0	942.2
32.5°	846.7	858.3	884.3	906.0	913.3
35°	810.5	820.6	848.1	874.2	882.9
37.5°	772.9	781.6	813.4	840.9	849.6
40°	732.3	743.9	777.2	809.1	817.7
42.5°	691.8	704.8	738.1	772.9	781.6
45°	651.3	665.8	700.5	736.7	746.8
47.5°	612.2	623.8	662.9	697.6	712.1
50°	570.2	581.8	619.5	658.5	673.0
52.5°	526.8	542.7	583.3	620.9	638.3
55°	484.9	500.8	542.7	580.4	596.3
57.5°	445.8	458.8	502.2	541.3	557.2
60°	403.8	415.4	461.7	503.7	518.1
62.5°	358.9	376.3	424.1	463.1	480.5
65°	318.4	337.2	387.9	425.5	442.9
67.5°	280.8	298.1	347.4	387.9	406.7
70°	237.4	260.5	311.2	351.7	369.1
72.5°	202.6	222.9	275.0	315.5	334.3
75°	162.1	186.7	238.8	279.3	293.8
77.5°	128.8	153.4	202.6	234.5	241.7
80°	94.1	118.7	165.0	180.9	185.3
82.5°	63.7	86.8	118.7	123.0	124.5
85°	39.1	53.6	69.5	69.5	69.5
87.5°	18.8	21.7	24.6	23.2	23.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)