

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: P309037

Luminaire Tested: **22FCZ2-34HE-UNV-L82765-S-CP187-W2A-U-5000K**

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: P309037  
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-5000K  
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**

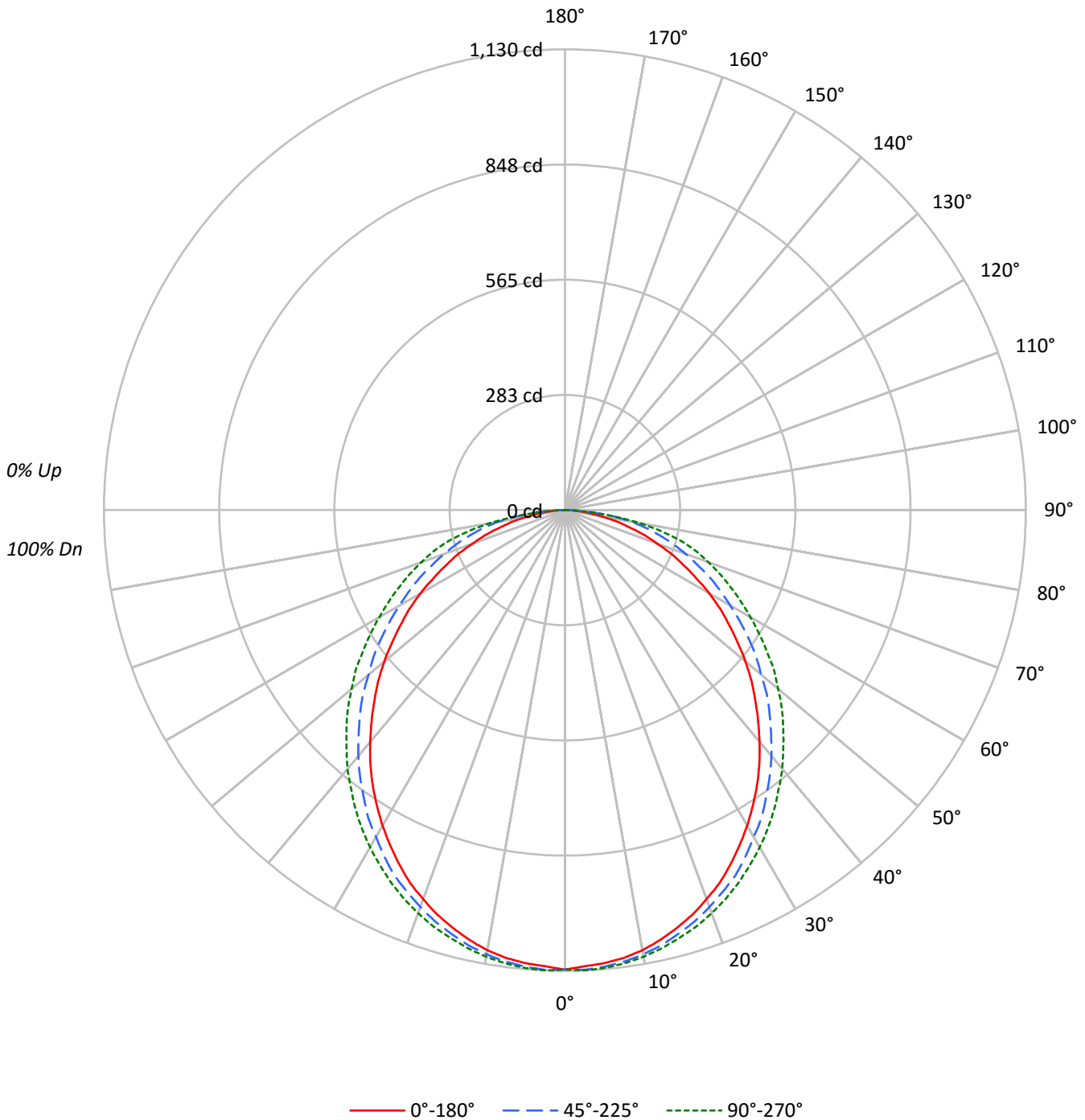
Lumens per Lamp: N/A  
Luminaire Lumens: 3145.0 lumens  
Efficiency: N/A  
Efficacy: 111.5 lumens/watt  
Spacing Criteria (0/90/45): 1.18 / 1.26 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 28.2  
Input Voltage (V): NR  
Input Current (A<sub>in</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°	3033	3033	3033
5°	3012	3036	3044
10°	2995	3023	3039
15°	2956	2997	3025
20°	2908	2967	3013
25°	2850	2937	2993
30°	2777	2877	2968
35°	2699	2825	2940
40°	2608	2768	2912
45°	2513	2703	2882
50°	2420	2629	2856
55°	2306	2582	2837
60°	2203	2519	2827
65°	2055	2504	2859
70°	1894	2482	2944
75°	1708	2517	3097
80°	1478	2593	2910
85°	1223	2174	2174



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	106.6	3.4
10°-20°	303.3	9.6
20°-30°	453.8	14.4
30°-40°	537.4	17.1
40°-50°	547.7	17.4
50°-60°	490.9	15.6
60°-70°	384.3	12.2
70°-80°	247.8	7.9
80°-90°	73.2	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°	863.7	27.5
0°-40°	1401.1	44.5
0°-60°	2439.7	77.6
0°-90°	3145.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3145.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1127	1127	1127	1127	1127	
5°	1115	1118	1124	1126	1127	106
15°	1061	1067	1076	1084	1086	299
25°	960	968	989	1002	1008	442
35°	822	832	860	886	895	514
45°	660	675	710	747	757	510
55°	492	508	550	588	605	441
65°	323	342	393	431	449	321
75°	164	189	242	283	298	176
85°	40	54	70	70	70	47
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1127.0	1127.0	1127.0	1127.0	1127.0
2.5°	1119.6	1122.5	1128.4	1129.9	1129.9
5°	1115.2	1118.1	1124.0	1125.5	1127.0
7.5°	1107.9	1109.3	1116.7	1119.6	1121.1
10°	1096.1	1099.1	1106.4	1110.8	1112.3
12.5°	1080.0	1084.4	1093.2	1099.1	1100.5
15°	1060.9	1066.8	1075.6	1084.4	1085.9
17.5°	1040.4	1046.2	1058.0	1068.3	1071.2
20°	1015.4	1022.8	1036.0	1047.7	1052.1
22.5°	990.5	996.4	1012.5	1027.2	1031.6
25°	959.7	968.5	989.0	1002.2	1008.1
27.5°	927.4	937.7	958.2	975.8	981.7
30°	893.6	903.9	925.9	947.9	955.3
32.5°	858.4	870.2	896.6	918.6	925.9
35°	821.7	832.0	859.9	886.3	895.1
37.5°	783.6	792.4	824.7	852.6	861.4
40°	742.5	754.2	788.0	820.3	829.1
42.5°	701.4	714.6	748.4	783.6	792.4
45°	660.3	675.0	710.2	746.9	757.2
47.5°	620.7	632.4	672.1	707.3	722.0
50°	578.1	589.9	628.0	667.7	682.3
52.5°	534.1	550.3	591.4	629.5	647.1
55°	491.6	507.7	550.3	588.4	604.6
57.5°	452.0	465.2	509.2	548.8	564.9
60°	409.4	421.1	468.1	510.6	525.3
62.5°	363.9	381.5	429.9	469.6	487.2
65°	322.8	341.9	393.3	431.4	449.0
67.5°	284.7	302.3	352.2	393.3	412.3
70°	240.7	264.1	315.5	356.6	374.2
72.5°	205.4	226.0	278.8	319.9	339.0
75°	164.3	189.3	242.1	283.2	297.9
77.5°	130.6	155.5	205.4	237.7	245.1
80°	95.4	120.3	167.3	183.4	187.8
82.5°	64.6	88.0	120.3	124.7	126.2
85°	39.6	54.3	70.4	70.4	70.4
87.5°	19.1	22.0	24.9	23.5	23.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)