

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: P312817

Luminaire Tested: **22FCZ2-34HE-UNV-L83050-CA08-W2A-U-4000K**

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: P312817  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-33)  
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-CA08-W2A-U-4000K  
Description: 2'X2' TROFFER LED MODULE, RIBBED LENS, 0.08" ACRYLIC SHEET  
Light Source: (168) 4000K 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**

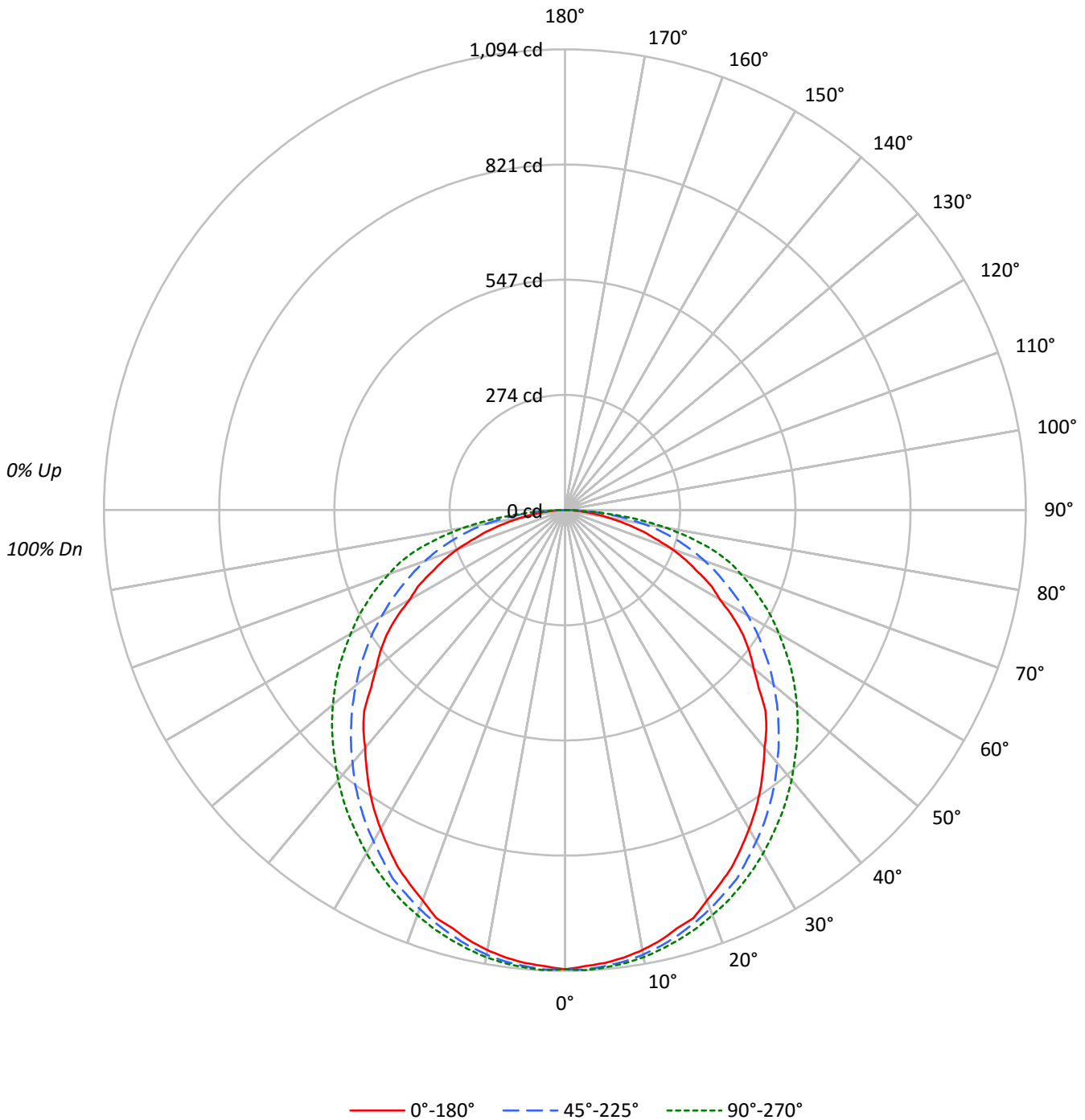
Lumens per Lamp: N/A  
Luminaire Lumens: 3250.0 lumens  
Efficiency: N/A  
Efficacy: 115.2 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.28 / 1.37  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 28.2  
Input Voltage (V): NR  
Input Current (A<sub>in</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	98	94	105	100	96	92	96	93	90	92	89	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59	56
4	81	69	60	53	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	51	44	38	49	43	38	36
7	64	50	41	35	62	49	40	34	47	40	34	46	39	34	45	38	34	32
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	28	40	33	27	39	32	27	38	32	27	25
10	52	38	30	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23

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

	0°	45°	90°
0°	2934	2934	2934
5°	2916	2937	2945
10°	2899	2928	2946
15°	2864	2908	2938
20°	2824	2887	2931
25°	2780	2868	2928
30°	2716	2823	2924
35°	2657	2790	2928
40°	2590	2754	2940
45°	2563	2729	2966
50°	2449	2709	3008
55°	2423	2700	3073
60°	2286	2696	3156
65°	2218	2714	3298
70°	2130	2778	3500
75°	1941	2862	3768
80°	1663	2965	3809
85°	1346	2834	3267



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	103.2	3.2
10°-20°	294.3	9.1
20°-30°	443.0	13.6
30°-40°	531.7	16.4
40°-50°	555.7	17.1
50°-60°	517.9	15.9
60°-70°	424.8	13.1
70°-80°	286.2	8.8
80°-90°	93.2	2.9
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°	840.5	25.9
0°-40°	1372.2	42.2
0°-60°	2445.8	75.3
0°-90°	3250.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3250.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1090	1090	1090	1090	1090	
5°	1080	1083	1087	1089	1090	102
15°	1028	1034	1044	1053	1055	291
25°	936	943	966	980	986	430
35°	809	820	849	879	891	506
45°	674	678	717	761	779	515
55°	516	526	576	630	655	458
65°	348	364	426	488	518	347
75°	187	207	275	338	362	196
85°	44	62	92	107	106	52
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1090.4	1090.4	1090.4	1090.4	1090.4
2.5°	1084.2	1087.3	1092.0	1093.5	1093.5
5°	1079.5	1082.6	1087.3	1088.8	1090.4
7.5°	1071.7	1074.8	1081.1	1084.2	1085.7
10°	1060.8	1064.0	1071.7	1076.4	1078.0
12.5°	1046.8	1050.0	1059.3	1065.5	1067.1
15°	1028.2	1034.4	1043.7	1053.1	1054.6
17.5°	1015.7	1014.2	1026.6	1037.5	1040.6
20°	986.2	994.0	1008.0	1020.4	1023.5
22.5°	961.3	967.5	986.2	1000.2	1006.4
25°	936.4	942.6	966.0	980.0	986.2
27.5°	905.3	914.6	936.4	956.6	964.4
30°	874.2	883.5	908.4	931.7	941.1
32.5°	843.1	854.0	880.4	905.3	916.2
35°	808.9	819.7	849.3	878.9	891.3
37.5°	773.1	787.1	818.2	850.9	864.9
40°	737.3	751.3	784.0	821.3	836.9
42.5°	707.8	714.0	751.3	791.7	807.3
45°	673.5	678.2	717.1	760.6	779.3
47.5°	623.8	640.9	682.9	731.1	749.7
50°	584.9	603.5	647.1	698.4	718.6
52.5°	552.2	564.6	612.9	664.2	687.5
55°	516.4	525.8	575.5	630.0	654.9
57.5°	472.9	490.0	539.8	595.8	620.6
60°	424.7	446.4	500.9	561.5	586.4
62.5°	393.5	406.0	465.1	525.8	553.8
65°	348.4	364.0	426.2	488.4	518.0
67.5°	311.1	326.7	390.4	452.6	482.2
70°	270.7	286.2	353.1	415.3	444.9
72.5°	224.0	245.8	315.8	378.0	409.1
75°	186.7	206.9	275.3	337.5	362.4
77.5°	144.7	171.1	234.9	286.2	304.9
80°	107.3	133.8	191.3	228.7	245.8
82.5°	73.1	99.6	143.1	171.1	180.4
85°	43.6	62.2	91.8	107.3	105.8
87.5°	20.2	26.4	37.3	37.3	35.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)