

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: P309013

Luminaire Tested: **22FCZ2-34HE-UNV-L82765-S-CA08-W2A-U-6500K**

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: P309013  
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-CA08-W2A-U-6500K  
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.08" ACRYLIC 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**

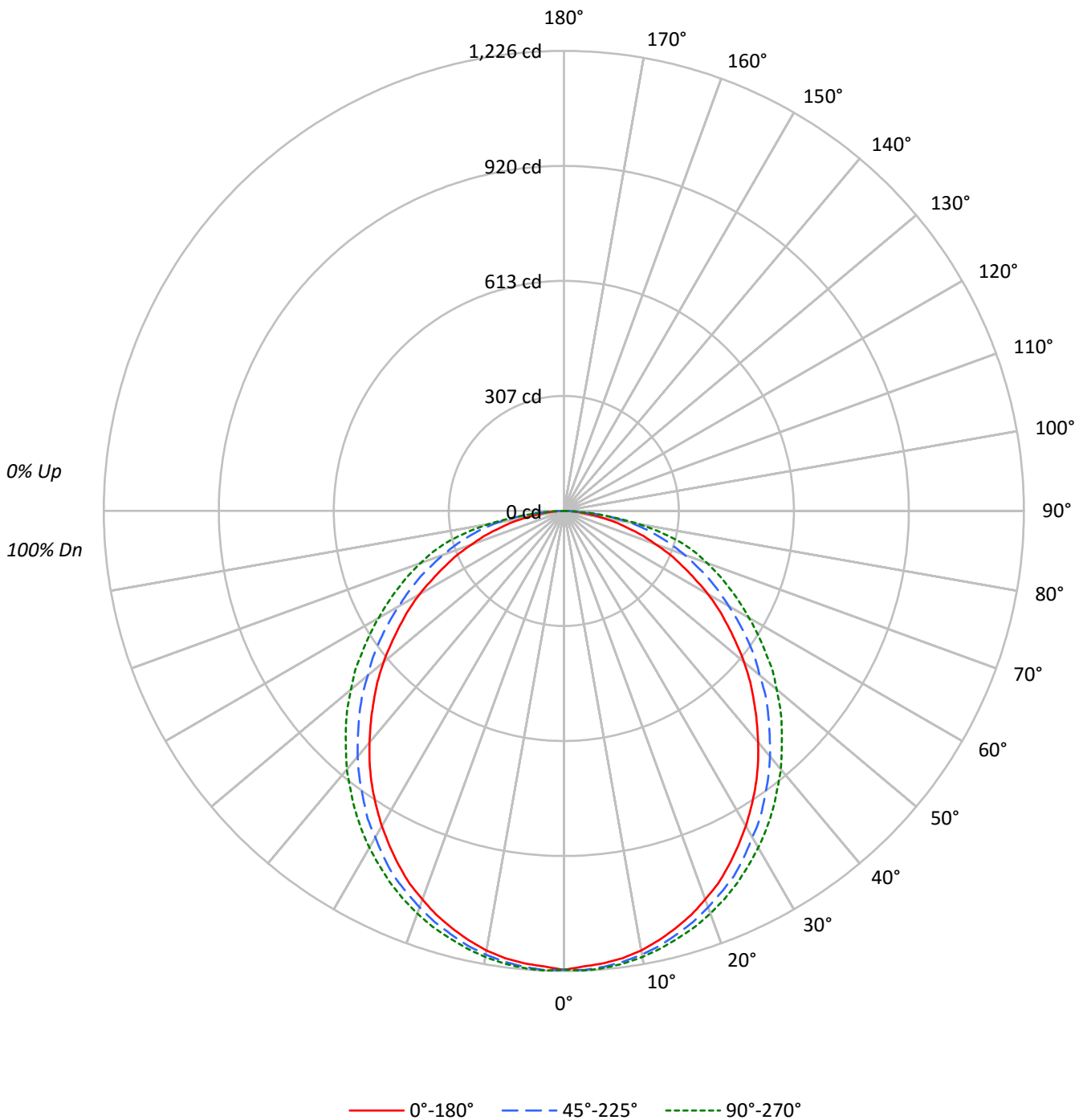
Lumens per Lamp: N/A  
Luminaire Lumens: 3412.0 lumens  
Efficiency: N/A  
Efficacy: 118.5 lumens/watt  
Spacing Criteria (0/90/45): 1.18 / 1.26 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 28.8  
Input Voltage (V): NR  
Input Current (A<sub>in</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°	3290	3290	3290
5°	3268	3294	3303
10°	3249	3280	3297
15°	3207	3251	3282
20°	3155	3218	3269
25°	3091	3186	3247
30°	3013	3121	3220
35°	2929	3065	3190
40°	2830	3003	3160
45°	2726	2932	3126
50°	2626	2853	3099
55°	2502	2801	3077
60°	2391	2733	3067
65°	2230	2716	3102
70°	2054	2693	3194
75°	1854	2731	3360
80°	1604	2813	3158
85°	1328	2359	2359



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	115.6	3.4
10°-20°	329.0	9.6
20°-30°	492.3	14.4
30°-40°	583.0	17.1
40°-50°	594.2	17.4
50°-60°	532.6	15.6
60°-70°	416.9	12.2
70°-80°	268.9	7.9
80°-90°	79.4	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°	937.0	27.5
0°-40°	1520.0	44.5
0°-60°	2646.8	77.6
0°-90°	3412.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3412.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1223	1223	1223	1223	1223	
5°	1210	1213	1219	1221	1223	115
15°	1151	1157	1167	1176	1178	325
25°	1041	1051	1073	1087	1094	479
35°	892	903	933	962	971	557
45°	716	732	770	810	822	553
55°	533	551	597	638	656	478
65°	350	371	427	468	487	348
75°	178	205	263	307	323	191
85°	43	59	76	76	76	50
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1222.6	1222.6	1222.6	1222.6	1222.6
2.5°	1214.7	1217.9	1224.2	1225.8	1225.8
5°	1209.9	1213.1	1219.4	1221.0	1222.6
7.5°	1201.9	1203.5	1211.5	1214.7	1216.3
10°	1189.2	1192.4	1200.3	1205.1	1206.7
12.5°	1171.7	1176.5	1186.0	1192.4	1194.0
15°	1151.0	1157.4	1166.9	1176.5	1178.1
17.5°	1128.7	1135.1	1147.8	1158.9	1162.1
20°	1101.6	1109.6	1123.9	1136.7	1141.4
22.5°	1074.6	1080.9	1098.5	1114.4	1119.1
25°	1041.1	1050.7	1073.0	1087.3	1093.7
27.5°	1006.1	1017.3	1039.6	1058.7	1065.0
30°	969.5	980.6	1004.5	1028.4	1036.4
32.5°	931.3	944.0	972.7	996.6	1004.5
35°	891.5	902.6	932.9	961.5	971.1
37.5°	850.1	859.7	894.7	924.9	934.5
40°	805.5	818.3	854.9	889.9	899.5
42.5°	761.0	775.3	811.9	850.1	859.7
45°	716.4	732.3	770.5	810.3	821.5
47.5°	673.4	686.1	729.1	767.3	783.2
50°	627.2	640.0	681.4	724.3	740.3
52.5°	579.5	597.0	641.6	683.0	702.1
55°	533.3	550.8	597.0	638.4	655.9
57.5°	490.3	504.7	552.4	595.4	612.9
60°	444.2	456.9	507.8	554.0	569.9
62.5°	394.8	413.9	466.4	509.4	528.5
65°	350.2	370.9	426.6	468.0	487.1
67.5°	308.8	327.9	382.1	426.6	447.3
70°	261.1	286.6	342.3	386.8	406.0
72.5°	222.9	245.2	302.5	347.0	367.7
75°	178.3	205.4	262.7	307.2	323.2
77.5°	141.7	168.7	222.9	257.9	265.9
80°	103.5	130.5	181.5	199.0	203.8
82.5°	70.0	95.5	130.5	135.3	136.9
85°	43.0	58.9	76.4	76.4	76.4
87.5°	20.7	23.9	27.1	25.5	25.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)