

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: P309012

Luminaire Tested: **22FCZ2-34HE-UNV-L82765-S-CA08-W2A-U-5700K**

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: P309012
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-5700K
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: 3403.0 lumens
Efficiency: N/A
Efficacy: 119.8 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

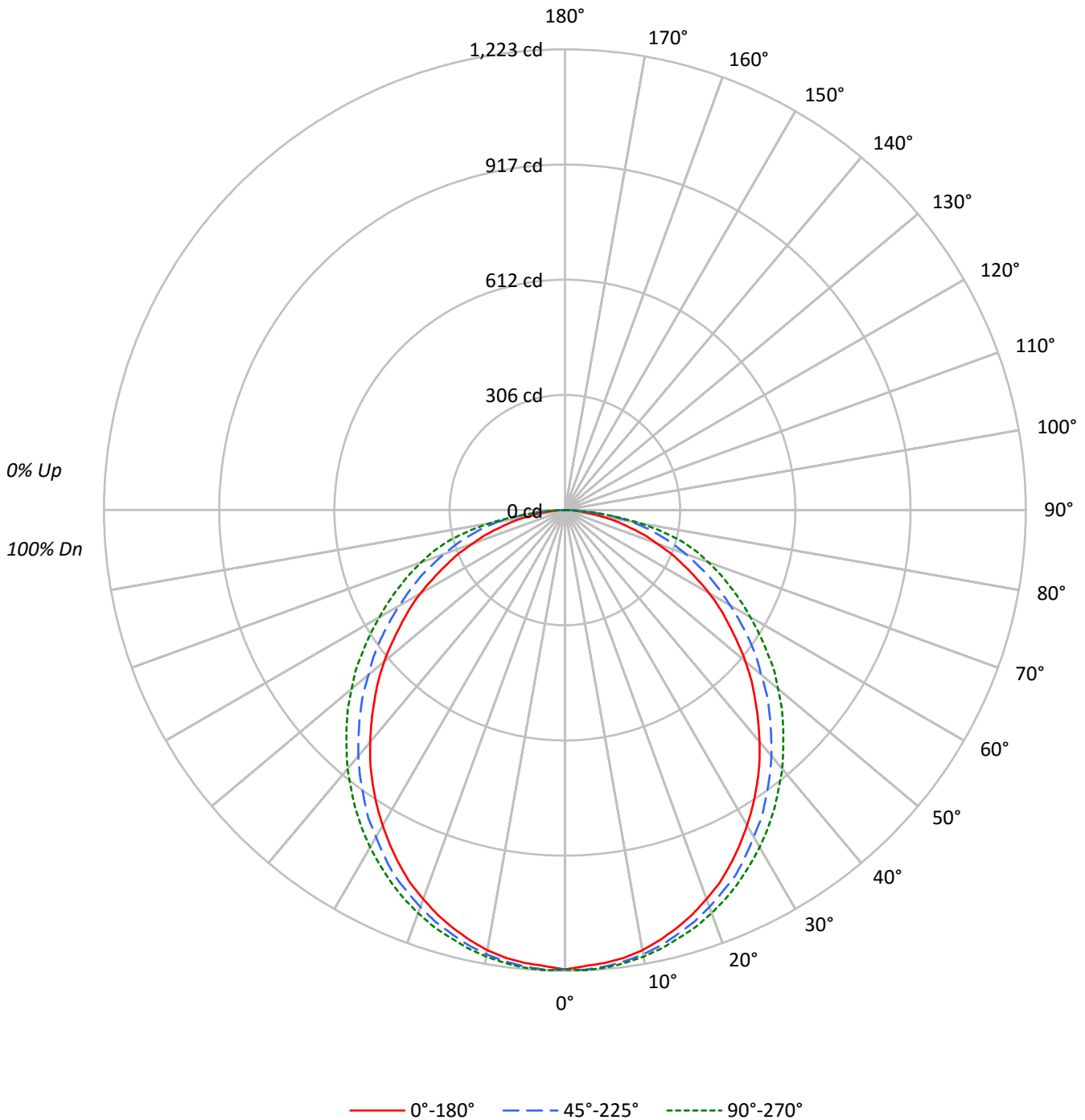
Input Watts (W): 28.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	3281	3281	3281
5°	3260	3285	3294
10°	3241	3271	3289
15°	3198	3242	3273
20°	3146	3210	3260
25°	3083	3178	3239
30°	3004	3113	3212
35°	2921	3056	3182
40°	2822	2995	3151
45°	2719	2925	3118
50°	2619	2845	3091
55°	2495	2793	3069
60°	2384	2726	3059
65°	2224	2709	3094
70°	2049	2686	3186
75°	1849	2724	3351
80°	1599	2805	3149
85°	1325	2353	2353



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	115.3	3.4
10°-20°	328.2	9.6
20°-30°	491.0	14.4
30°-40°	581.5	17.1
40°-50°	592.6	17.4
50°-60°	531.2	15.6
60°-70°	415.8	12.2
70°-80°	268.1	7.9
80°-90°	79.2	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°	934.5	27.5
0°-40°	1516.0	44.5
0°-60°	2639.8	77.6
0°-90°	3403.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3403.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1219	1219	1219	1219	1219	
5°	1207	1210	1216	1218	1219	115
15°	1148	1154	1164	1173	1175	324
25°	1038	1048	1070	1084	1091	478
35°	889	900	930	959	968	556
45°	714	730	768	808	819	552
55°	532	549	595	637	654	477
65°	349	370	426	467	486	347
75°	178	205	262	306	322	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°	1219.4	1219.4	1219.4	1219.4	1219.4
2.5°	1211.5	1214.6	1221.0	1222.6	1222.6
5°	1206.7	1209.9	1216.2	1217.8	1219.4
7.5°	1198.8	1200.3	1208.3	1211.5	1213.0
10°	1186.1	1189.2	1197.2	1201.9	1203.5
12.5°	1168.6	1173.4	1182.9	1189.2	1190.8
15°	1148.0	1154.3	1163.8	1173.4	1174.9
17.5°	1125.7	1132.1	1144.8	1155.9	1159.1
20°	1098.7	1106.7	1121.0	1133.7	1138.4
22.5°	1071.7	1078.1	1095.6	1111.4	1116.2
25°	1038.4	1047.9	1070.2	1084.4	1090.8
27.5°	1003.5	1014.6	1036.8	1055.9	1062.2
30°	966.9	978.1	1001.9	1025.7	1033.6
32.5°	928.8	941.5	970.1	993.9	1001.9
35°	889.1	900.3	930.4	959.0	968.5
37.5°	847.9	857.4	892.3	922.5	932.0
40°	803.4	816.1	852.6	887.6	897.1
42.5°	759.0	773.2	809.8	847.9	857.4
45°	714.5	730.4	768.5	808.2	819.3
47.5°	671.6	684.3	727.2	765.3	781.2
50°	625.6	638.3	679.6	722.4	738.3
52.5°	577.9	595.4	639.9	681.1	700.2
55°	531.9	549.4	595.4	636.7	654.2
57.5°	489.0	503.3	551.0	593.8	611.3
60°	443.0	455.7	506.5	552.5	568.4
62.5°	393.8	412.8	465.2	508.1	527.1
65°	349.3	369.9	425.5	466.8	485.9
67.5°	308.0	327.1	381.1	425.5	446.2
70°	260.4	285.8	341.4	385.8	404.9
72.5°	222.3	244.5	301.7	346.1	366.8
75°	177.8	204.8	262.0	306.4	322.3
77.5°	141.3	168.3	222.3	257.2	265.2
80°	103.2	130.2	181.0	198.5	203.2
82.5°	69.9	95.3	130.2	135.0	136.5
85°	42.9	58.7	76.2	76.2	76.2
87.5°	20.6	23.8	27.0	25.4	25.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)