

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: P312965

Luminaire Tested: **22FCZ2-34HE-UNV-L83050-S-CA08-W2A-U-3000K**

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: P312965
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-L83050-S-CA08-W2A-U-3000K
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: 3085.0 lumens
Efficiency: N/A
Efficacy: 112.2 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

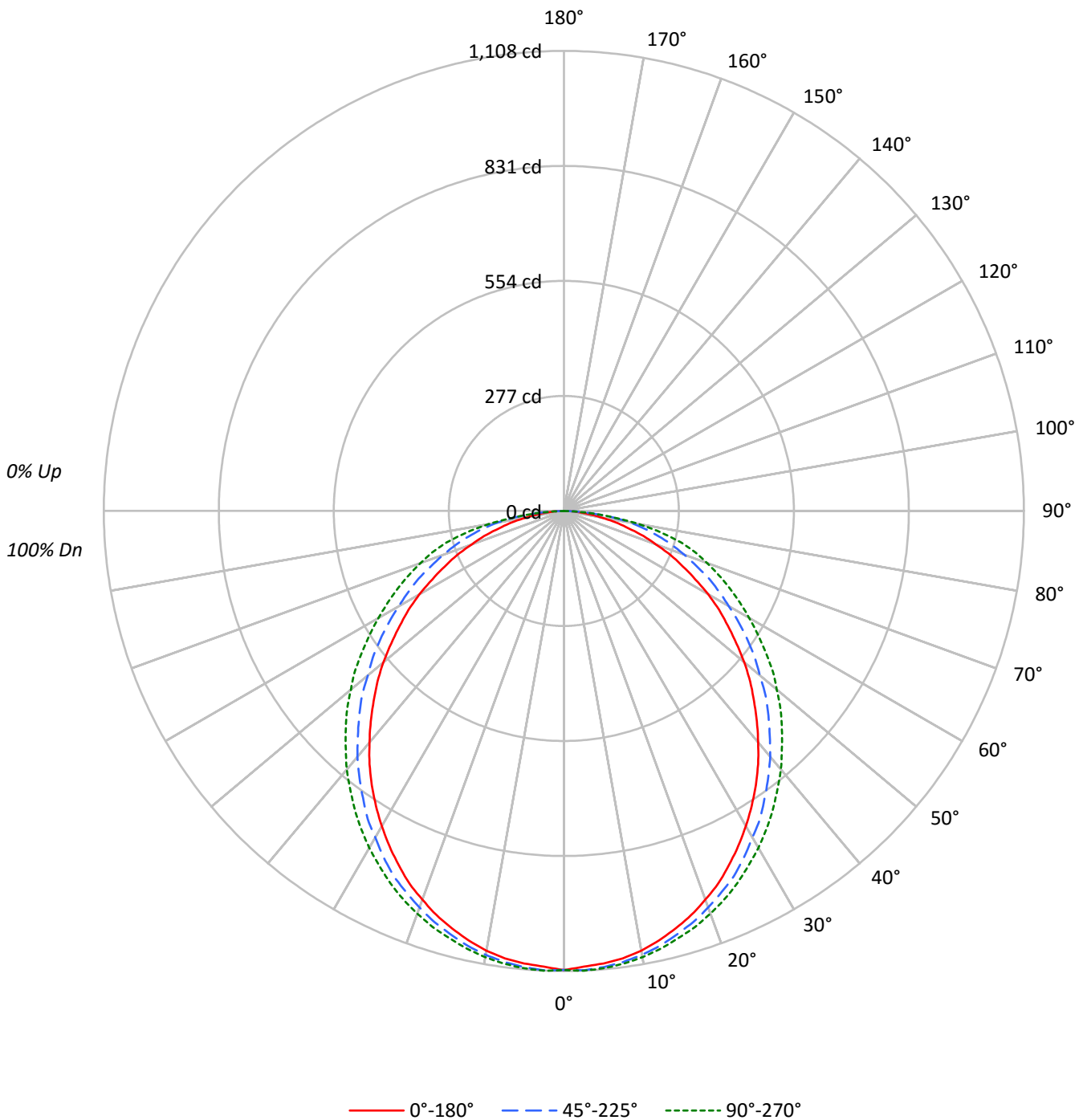
Input Watts (W): 27.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	2975	2975	2975
5°	2955	2978	2986
10°	2938	2966	2981
15°	2899	2939	2967
20°	2853	2910	2955
25°	2795	2880	2936
30°	2724	2822	2912
35°	2648	2771	2884
40°	2558	2715	2857
45°	2465	2651	2826
50°	2374	2579	2802
55°	2262	2533	2782
60°	2161	2471	2773
65°	2017	2457	2805
70°	1858	2435	2888
75°	1676	2469	3038
80°	1450	2543	2854
85°	1201	2133	2133



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	104.5	3.4
10°-20°	297.5	9.6
20°-30°	445.1	14.4
30°-40°	527.2	17.1
40°-50°	537.2	17.4
50°-60°	481.5	15.6
60°-70°	377.0	12.2
70°-80°	243.1	7.9
80°-90°	71.8	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°	847.2	27.5
0°-40°	1374.4	44.5
0°-60°	2393.1	77.6
0°-90°	3085.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3085.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1106	1106	1106	1106	1106	
5°	1094	1097	1103	1104	1106	104
15°	1041	1046	1055	1064	1065	293
25°	941	950	970	983	989	433
35°	806	816	844	869	878	504
45°	648	662	697	733	743	500
55°	482	498	540	577	593	432
65°	317	335	386	423	440	315
75°	161	186	238	278	292	173
85°	39	53	69	69	69	46
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1105.5	1105.5	1105.5	1105.5	1105.5
2.5°	1098.3	1101.1	1106.9	1108.3	1108.3
5°	1093.9	1096.8	1102.6	1104.0	1105.5
7.5°	1086.7	1088.2	1095.4	1098.3	1099.7
10°	1075.2	1078.1	1085.3	1089.6	1091.1
12.5°	1059.4	1063.7	1072.3	1078.1	1079.5
15°	1040.7	1046.4	1055.1	1063.7	1065.1
17.5°	1020.5	1026.3	1037.8	1047.9	1050.8
20°	996.1	1003.3	1016.2	1027.7	1032.0
22.5°	971.6	977.3	993.2	1007.6	1011.9
25°	941.4	950.0	970.1	983.1	988.9
27.5°	909.7	919.8	939.9	957.2	963.0
30°	876.6	886.7	908.3	929.8	937.0
32.5°	842.0	853.6	879.5	901.1	908.3
35°	806.1	816.1	843.5	869.4	878.0
37.5°	768.6	777.3	808.9	836.3	844.9
40°	728.3	739.8	773.0	804.6	813.3
42.5°	688.0	701.0	734.1	768.6	777.3
45°	647.7	662.1	696.7	732.6	742.7
47.5°	608.9	620.4	659.2	693.8	708.2
50°	567.1	578.6	616.1	654.9	669.3
52.5°	523.9	539.8	580.1	617.5	634.8
55°	482.2	498.0	539.8	577.2	593.0
57.5°	443.3	456.3	499.5	538.3	554.2
60°	401.6	413.1	459.2	500.9	515.3
62.5°	357.0	374.2	421.7	460.6	477.9
65°	316.7	335.4	385.8	423.2	440.5
67.5°	279.2	296.5	345.5	385.8	404.5
70°	236.1	259.1	309.5	349.8	367.0
72.5°	201.5	221.7	273.5	313.8	332.5
75°	161.2	185.7	237.5	277.8	292.2
77.5°	128.1	152.6	201.5	233.2	240.4
80°	93.6	118.0	164.1	179.9	184.2
82.5°	63.3	86.4	118.0	122.3	123.8
85°	38.9	53.3	69.1	69.1	69.1
87.5°	18.7	21.6	24.5	23.0	23.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)