

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: P309021

Luminaire Tested: **22FCZ2-34HE-UNV-L82765-S-CA125-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: P309021
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-CA125-W2A-U-5700K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.125" 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: 3391.0 lumens
Efficiency: N/A
Efficacy: 119.4 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

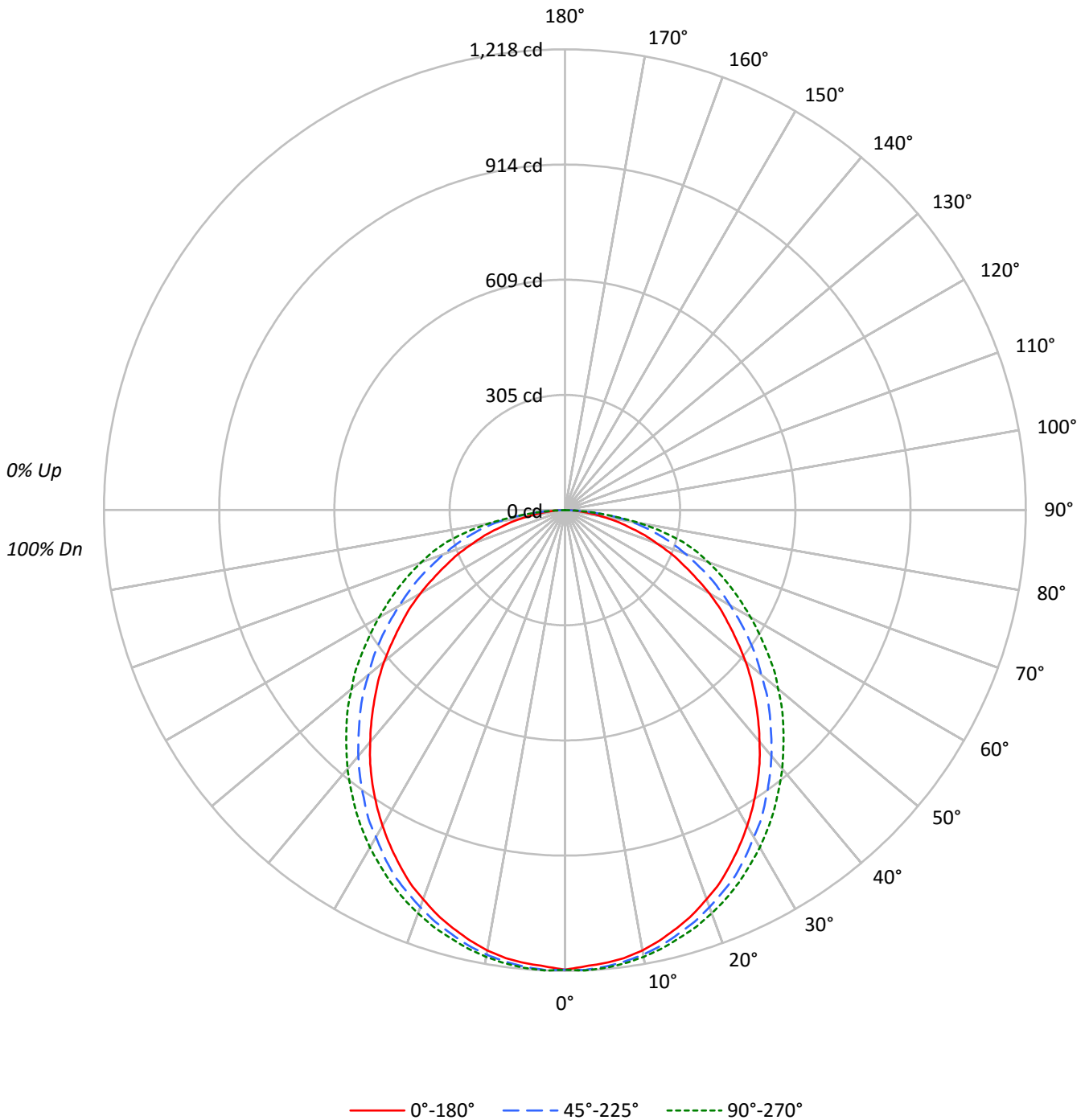
Input Watts (W): 28.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	3270	3270	3270
5°	3248	3274	3282
10°	3230	3260	3277
15°	3187	3231	3262
20°	3135	3199	3249
25°	3072	3166	3227
30°	2994	3102	3200
35°	2911	3046	3170
40°	2812	2984	3140
45°	2710	2914	3107
50°	2610	2835	3080
55°	2487	2784	3058
60°	2376	2716	3048
65°	2216	2700	3082
70°	2042	2677	3175
75°	1842	2715	3340
80°	1593	2796	3138
85°	1318	2343	2343



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	114.9	3.4
10°-20°	327.0	9.6
20°-30°	489.3	14.4
30°-40°	579.4	17.1
40°-50°	590.5	17.4
50°-60°	529.3	15.6
60°-70°	414.4	12.2
70°-80°	267.2	7.9
80°-90°	78.9	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°	931.2	27.5
0°-40°	1510.7	44.5
0°-60°	2630.5	77.6
0°-90°	3391.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3391.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1215	1215	1215	1215	1215	
5°	1202	1206	1212	1214	1215	114
15°	1144	1150	1160	1169	1171	323
25°	1035	1044	1066	1081	1087	476
35°	886	897	927	956	965	554
45°	712	728	766	805	816	550
55°	530	547	593	634	652	475
65°	348	369	424	465	484	346
75°	177	204	261	305	321	190
85°	43	58	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°	1215.1	1215.1	1215.1	1215.1	1215.1
2.5°	1207.2	1210.4	1216.7	1218.3	1218.3
5°	1202.4	1205.6	1211.9	1213.5	1215.1
7.5°	1194.5	1196.1	1204.0	1207.2	1208.8
10°	1181.9	1185.0	1193.0	1197.7	1199.3
12.5°	1164.5	1169.2	1178.7	1185.0	1186.6
15°	1143.9	1150.2	1159.7	1169.2	1170.8
17.5°	1121.8	1128.1	1140.7	1151.8	1155.0
20°	1094.9	1102.8	1117.0	1129.7	1134.4
22.5°	1068.0	1074.3	1091.7	1107.5	1112.3
25°	1034.7	1044.2	1066.4	1080.6	1086.9
27.5°	999.9	1011.0	1033.2	1052.1	1058.5
30°	963.5	974.6	998.3	1022.1	1030.0
32.5°	925.6	938.2	966.7	990.4	998.3
35°	886.0	897.1	927.1	955.6	965.1
37.5°	844.9	854.4	889.2	919.2	928.7
40°	800.6	813.2	849.6	884.4	893.9
42.5°	756.3	770.5	806.9	844.9	854.4
45°	712.0	727.8	765.8	805.3	816.4
47.5°	669.3	681.9	724.6	762.6	778.4
50°	623.4	636.0	677.2	719.9	735.7
52.5°	575.9	593.3	637.6	678.7	697.7
55°	530.0	547.4	593.3	634.4	651.9
57.5°	487.3	501.5	549.0	591.7	609.1
60°	441.4	454.1	504.7	550.6	566.4
62.5°	392.4	411.4	463.6	506.3	525.3
65°	348.1	368.6	424.0	465.2	484.1
67.5°	306.9	325.9	379.7	424.0	444.6
70°	259.5	284.8	340.2	384.5	403.5
72.5°	221.5	243.7	300.6	344.9	365.5
75°	177.2	204.1	261.1	305.4	321.2
77.5°	140.8	167.7	221.5	256.3	264.2
80°	102.8	129.7	180.4	197.8	202.5
82.5°	69.6	94.9	129.7	134.5	136.1
85°	42.7	58.5	75.9	75.9	75.9
87.5°	20.6	23.7	26.9	25.3	25.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)