

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: P309031

Luminaire Tested: **22FCZ2-34HE-UNV-L82765-S-CP125-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: P309031
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-CP125-W2A-U-6500K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.125" POLYCARB 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: 3334.0 lumens
Efficiency: N/A
Efficacy: 115.8 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

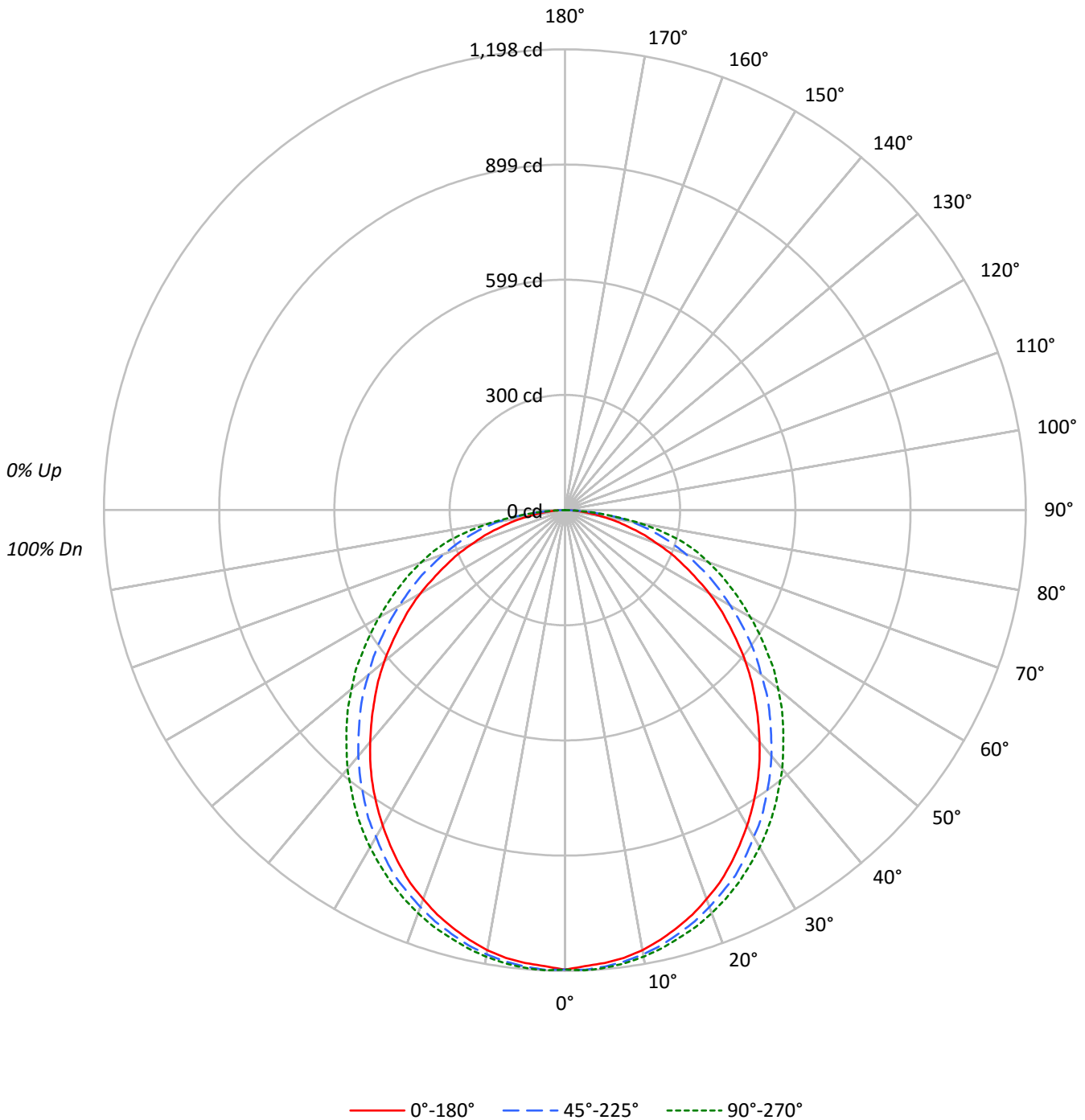
Input Watts (W): 28.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3215	3215	3215
5°	3193	3219	3227
10°	3175	3205	3222
15°	3133	3176	3207
20°	3083	3145	3194
25°	3021	3113	3173
30°	2944	3050	3147
35°	2862	2995	3117
40°	2765	2934	3087
45°	2664	2865	3055
50°	2566	2787	3028
55°	2445	2737	3007
60°	2336	2671	2997
65°	2179	2655	3031
70°	2007	2631	3121
75°	1811	2669	3283
80°	1567	2748	3085
85°	1297	2306	2306



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	113.0	3.4
10°-20°	321.5	9.6
20°-30°	481.1	14.4
30°-40°	569.7	17.1
40°-50°	580.6	17.4
50°-60°	520.4	15.6
60°-70°	407.4	12.2
70°-80°	262.7	7.9
80°-90°	77.6	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°	915.6	27.5
0°-40°	1485.3	44.5
0°-60°	2586.3	77.6
0°-90°	3334.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3334.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1195	1195	1195	1195	1195	
5°	1182	1185	1192	1193	1195	112
15°	1125	1131	1140	1150	1151	317
25°	1017	1027	1048	1062	1069	468
35°	871	882	912	940	949	544
45°	700	716	753	792	803	541
55°	521	538	583	624	641	467
65°	342	362	417	457	476	340
75°	174	201	257	300	316	187
85°	42	58	75	75	75	49
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1194.7	1194.7	1194.7	1194.7	1194.7
2.5°	1186.9	1190.0	1196.2	1197.8	1197.8
5°	1182.2	1185.3	1191.6	1193.1	1194.7
7.5°	1174.5	1176.0	1183.8	1186.9	1188.5
10°	1162.0	1165.1	1172.9	1177.6	1179.1
12.5°	1144.9	1149.6	1158.9	1165.1	1166.7
15°	1124.7	1130.9	1140.2	1149.6	1151.1
17.5°	1102.9	1109.1	1121.6	1132.5	1135.6
20°	1076.5	1084.2	1098.2	1110.7	1115.3
22.5°	1050.0	1056.2	1073.3	1088.9	1093.6
25°	1017.3	1026.7	1048.5	1062.5	1068.7
27.5°	983.1	994.0	1015.8	1034.5	1040.7
30°	947.3	958.2	981.6	1004.9	1012.7
32.5°	910.0	922.5	950.5	973.8	981.6
35°	871.1	882.0	911.6	939.6	948.9
37.5°	830.7	840.0	874.2	903.8	913.1
40°	787.1	799.6	835.3	869.6	878.9
42.5°	743.6	757.6	793.3	830.7	840.0
45°	700.0	715.6	752.9	791.8	802.7
47.5°	658.0	670.4	712.5	749.8	765.3
50°	612.9	625.3	665.8	707.8	723.3
52.5°	566.2	583.3	626.9	667.3	686.0
55°	521.1	538.2	583.3	623.8	640.9
57.5°	479.1	493.1	539.8	581.8	598.9
60°	434.0	446.4	496.2	541.3	556.9
62.5°	385.8	404.4	455.8	497.8	516.4
65°	342.2	362.4	416.9	457.3	476.0
67.5°	301.8	320.4	373.3	416.9	437.1
70°	255.1	280.0	334.4	378.0	396.7
72.5°	217.8	239.6	295.6	339.1	359.3
75°	174.2	200.7	256.7	300.2	315.8
77.5°	138.4	164.9	217.8	252.0	259.8
80°	101.1	127.6	177.3	194.4	199.1
82.5°	68.4	93.3	127.6	132.2	133.8
85°	42.0	57.6	74.7	74.7	74.7
87.5°	20.2	23.3	26.4	24.9	24.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)