

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: P309010

Luminaire Tested: **22FCZ2-34HE-UNV-L82765-S-CA08-W2A-U-5000K**

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: P309010
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-5000K
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: 3361.0 lumens
Efficiency: N/A
Efficacy: 119.2 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

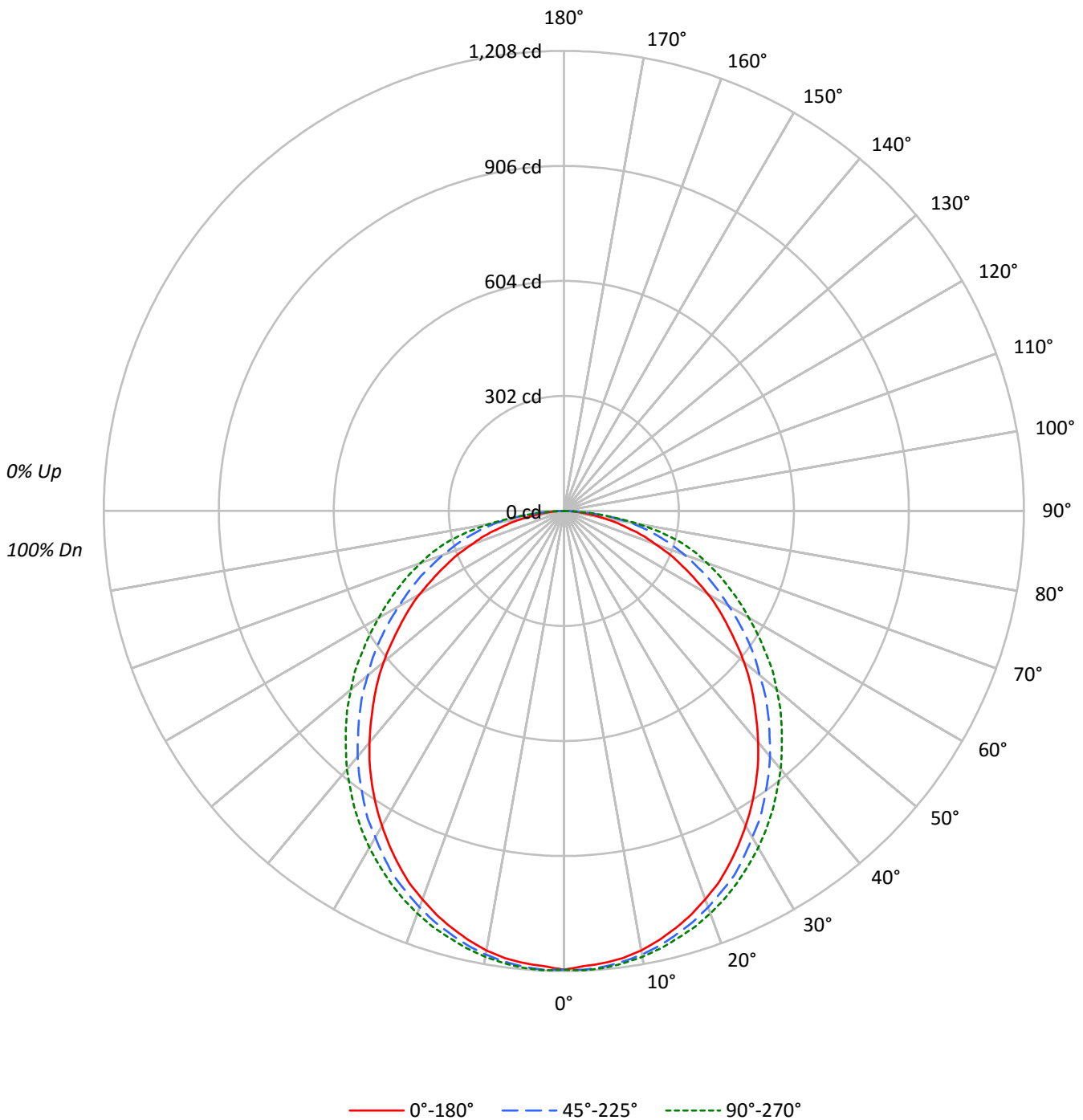
Input Watts (W): 28.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3241	3241	3241
5°	3219	3245	3253
10°	3201	3231	3248
15°	3159	3202	3233
20°	3108	3170	3220
25°	3045	3138	3199
30°	2967	3075	3172
35°	2885	3019	3143
40°	2787	2958	3112
45°	2686	2888	3080
50°	2587	2810	3053
55°	2464	2759	3031
60°	2355	2692	3021
65°	2197	2676	3056
70°	2024	2653	3146
75°	1826	2690	3309
80°	1579	2771	3110
85°	1306	2325	2325



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	113.9	3.4
10°-20°	324.1	9.6
20°-30°	485.0	14.4
30°-40°	574.3	17.1
40°-50°	585.3	17.4
50°-60°	524.6	15.6
60°-70°	410.7	12.2
70°-80°	264.8	7.9
80°-90°	78.2	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°	923.0	27.5
0°-40°	1497.3	44.5
0°-60°	2607.2	77.6
0°-90°	3361.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3361.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1204	1204	1204	1204	1204	
5°	1192	1195	1201	1203	1204	113
15°	1134	1140	1150	1159	1160	320
25°	1026	1035	1057	1071	1077	472
35°	878	889	919	947	957	549
45°	706	721	759	798	809	545
55°	525	543	588	629	646	471
65°	345	365	420	461	480	343
75°	176	202	259	303	318	188
85°	42	58	75	75	75	50
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1204.4	1204.4	1204.4	1204.4	1204.4
2.5°	1196.5	1199.6	1205.9	1207.5	1207.5
5°	1191.8	1194.9	1201.2	1202.8	1204.4
7.5°	1184.0	1185.5	1193.4	1196.5	1198.1
10°	1171.4	1174.6	1182.4	1187.1	1188.7
12.5°	1154.2	1158.9	1168.3	1174.6	1176.1
15°	1133.8	1140.1	1149.5	1158.9	1160.4
17.5°	1111.8	1118.1	1130.6	1141.6	1144.8
20°	1085.2	1093.0	1107.1	1119.7	1124.4
22.5°	1058.5	1064.8	1082.0	1097.7	1102.4
25°	1025.6	1035.0	1056.9	1071.1	1077.3
27.5°	991.1	1002.1	1024.0	1042.8	1049.1
30°	955.0	966.0	989.5	1013.0	1020.9
32.5°	917.4	929.9	958.1	981.7	989.5
35°	878.2	889.1	918.9	947.2	956.6
37.5°	837.4	846.8	881.3	911.1	920.5
40°	793.5	806.0	842.1	876.6	886.0
42.5°	749.6	763.7	799.8	837.4	846.8
45°	705.7	721.4	759.0	798.2	809.2
47.5°	663.3	675.9	718.2	755.9	771.5
50°	617.9	630.4	671.2	713.5	729.2
52.5°	570.8	588.1	632.0	672.7	691.6
55°	525.3	542.6	588.1	628.8	646.1
57.5°	483.0	497.1	544.2	586.5	603.7
60°	437.5	450.1	500.2	545.7	561.4
62.5°	388.9	407.7	459.5	501.8	520.6
65°	345.0	365.4	420.3	461.0	479.9
67.5°	304.2	323.0	376.4	420.3	440.7
70°	257.2	282.3	337.2	381.1	399.9
72.5°	219.5	241.5	298.0	341.9	362.2
75°	175.6	202.3	258.7	302.7	318.3
77.5°	139.6	166.2	219.5	254.0	261.9
80°	101.9	128.6	178.8	196.0	200.7
82.5°	69.0	94.1	128.6	133.3	134.9
85°	42.3	58.0	75.3	75.3	75.3
87.5°	20.4	23.5	26.7	25.1	25.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)