

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: P309040

Luminaire Tested: **22FCZ2-34HE-UNV-L82765-S-CP187-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: P309040
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-CP187-W2A-U-6500K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.187" 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: 3193.0 lumens
Efficiency: N/A
Efficacy: 110.9 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

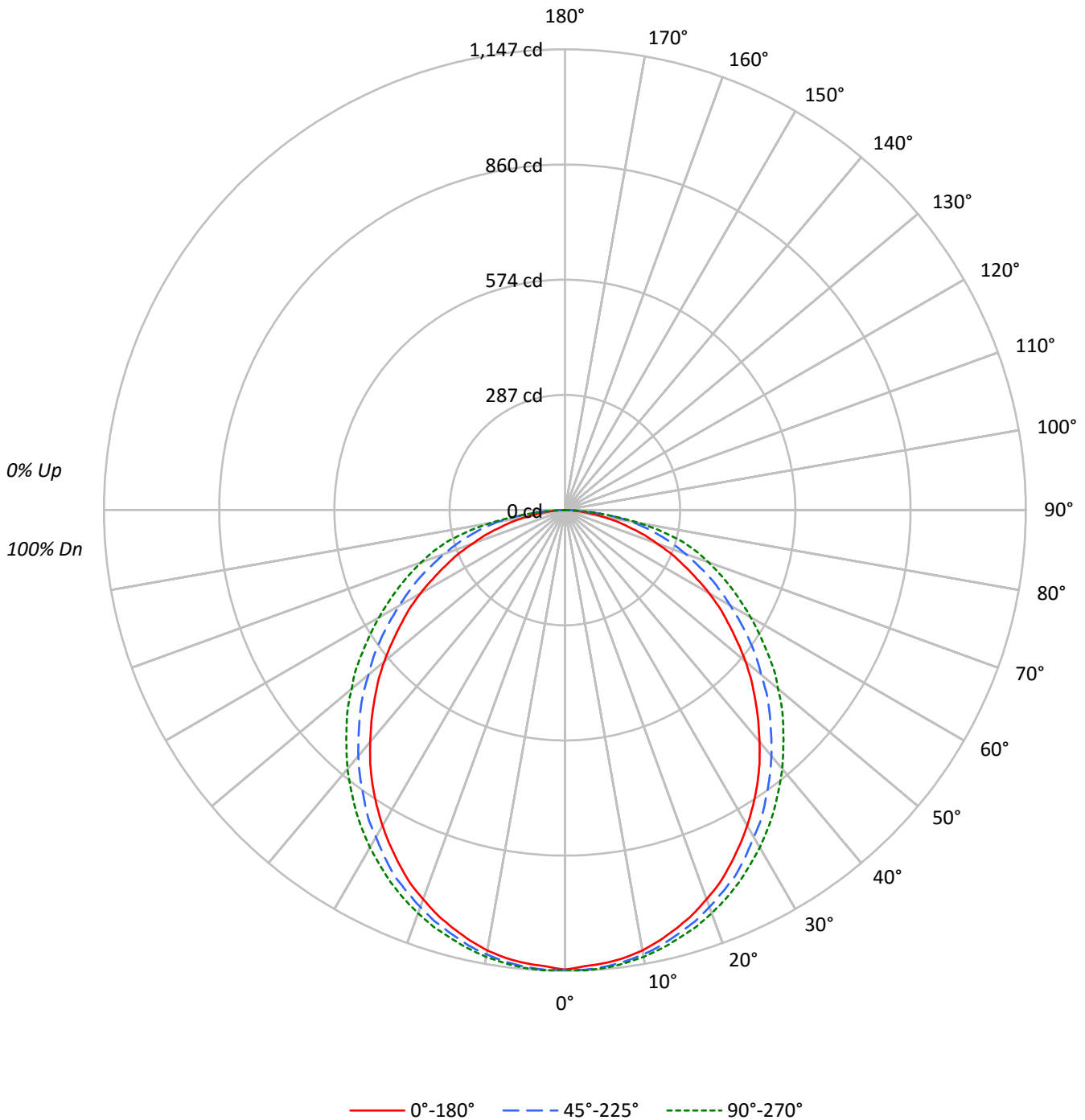
Input Watts (W): 28.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P309040

CATALOG NUMBER: 22FCZ2-34HE-UNV-L82765-S-CP187-W2A-U-6500K

Luminous Intensity Polar Plot





TEST NUMBER: P309040

CATALOG NUMBER: 22FCZ2-34HE-UNV-L82765-S-CP187-W2A-U-6500K

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°	3079	3079	3079
5°	3058	3083	3091
10°	3041	3069	3086
15°	3001	3042	3071
20°	2952	3012	3059
25°	2893	2981	3039
30°	2819	2921	3013
35°	2741	2868	2985
40°	2648	2810	2957
45°	2551	2744	2925
50°	2457	2669	2900
55°	2342	2621	2880
60°	2237	2558	2870
65°	2087	2543	2903
70°	1922	2520	2989
75°	1735	2556	3144
80°	1500	2631	2955
85°	1241	2208	2208



TEST NUMBER: P309040

CATALOG NUMBER: 22FCZ2-34HE-UNV-L82765-S-CP187-W2A-U-6500K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	108.2	3.4
10°-20°	307.9	9.6
20°-30°	460.7	14.4
30°-40°	545.6	17.1
40°-50°	556.0	17.4
50°-60°	498.4	15.6
60°-70°	390.2	12.2
70°-80°	251.6	7.9
80°-90°	74.3	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°	876.8	27.5
0°-40°	1422.5	44.5
0°-60°	2476.9	77.6
0°-90°	3193.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3193.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1144	1144	1144	1144	1144	
5°	1132	1135	1141	1143	1144	107
15°	1077	1083	1092	1101	1102	304
25°	974	983	1004	1018	1024	448
35°	834	845	873	900	909	521
45°	670	685	721	758	769	518
55°	499	516	559	597	614	447
65°	328	347	399	438	456	326
75°	167	192	246	288	302	179
85°	40	55	72	72	72	47
90°	0	0	0	0	0	



TEST NUMBER: P309040

CATALOG NUMBER: 22FCZ2-34HE-UNV-L82765-S-CP187-W2A-U-6500K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1144.2	1144.2	1144.2	1144.2	1144.2
2.5°	1136.7	1139.7	1145.6	1147.1	1147.1
5°	1132.2	1135.2	1141.2	1142.7	1144.2
7.5°	1124.8	1126.3	1133.7	1136.7	1138.2
10°	1112.9	1115.8	1123.3	1127.8	1129.3
12.5°	1096.5	1100.9	1109.9	1115.8	1117.3
15°	1077.1	1083.1	1092.0	1100.9	1102.4
17.5°	1056.3	1062.2	1074.1	1084.6	1087.5
20°	1030.9	1038.4	1051.8	1063.7	1068.2
22.5°	1005.6	1011.6	1027.9	1042.8	1047.3
25°	974.3	983.3	1004.1	1017.5	1023.5
27.5°	941.5	952.0	972.8	990.7	996.7
30°	907.3	917.7	940.1	962.4	969.8
32.5°	871.5	883.4	910.3	932.6	940.1
35°	834.3	844.7	873.0	899.8	908.8
37.5°	795.5	804.5	837.3	865.6	874.5
40°	753.8	765.7	800.0	832.8	841.7
42.5°	712.1	725.5	759.8	795.5	804.5
45°	670.4	685.3	721.1	758.3	768.7
47.5°	630.2	642.1	682.3	718.1	733.0
50°	587.0	598.9	637.6	677.9	692.7
52.5°	542.3	558.7	600.4	639.1	657.0
55°	499.1	515.5	558.7	597.4	613.8
57.5°	458.9	472.3	517.0	557.2	573.6
60°	415.6	427.6	475.2	518.4	533.3
62.5°	369.5	387.3	436.5	476.7	494.6
65°	327.8	347.1	399.3	438.0	455.9
67.5°	289.0	306.9	357.5	399.3	418.6
70°	244.3	268.2	320.3	362.0	379.9
72.5°	208.6	229.4	283.1	324.8	344.1
75°	166.9	192.2	245.8	287.5	302.4
77.5°	132.6	157.9	208.6	241.3	248.8
80°	96.8	122.2	169.8	186.2	190.7
82.5°	65.6	89.4	122.2	126.6	128.1
85°	40.2	55.1	71.5	71.5	71.5
87.5°	19.4	22.3	25.3	23.8	23.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)