

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: P308812

Luminaire Tested: **22FCZ2-39HE-UNV-L82765-CP187-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: P308812
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-33)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 22FCZ2-39HE-UNV-L82765-CP187-W2A-U-5000K
Description: 2'X2' TROFFER LED MODULE, RIBBED 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: 3418.0 lumens
Efficiency: N/A
Efficacy: 103.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.28 / 1.37
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

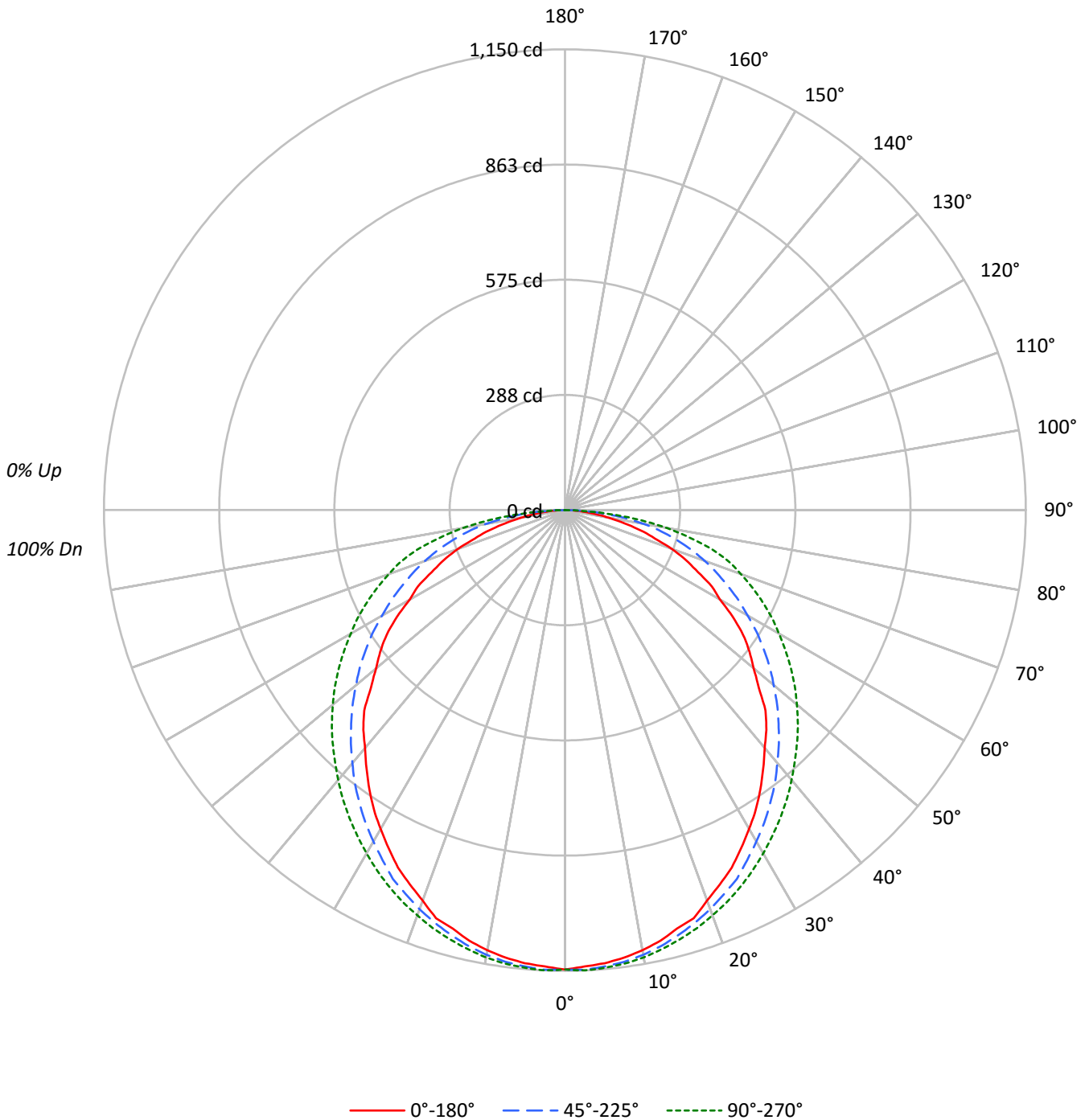
Input Watts (W): 33.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	98	94	105	100	96	92	96	93	90	92	89	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59	56
4	81	69	60	53	79	67	59	52	65	57	51	62	56	51	60	55	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	39	51	44	38	49	43	38	36
7	64	50	41	35	62	49	40	34	47	40	34	46	39	34	45	38	34	32
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28
9	55	42	33	28	54	41	33	28	40	33	27	39	32	27	38	32	27	25
10	52	38	30	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3086	3086	3086
5°	3067	3089	3098
10°	3049	3080	3098
15°	3012	3058	3090
20°	2970	3036	3082
25°	2924	3016	3080
30°	2857	2969	3075
35°	2795	2934	3079
40°	2724	2896	3092
45°	2696	2870	3119
50°	2575	2849	3164
55°	2548	2840	3231
60°	2404	2835	3319
65°	2333	2854	3469
70°	2239	2921	3681
75°	2041	3011	3963
80°	1750	3118	4006
85°	1414	2979	3433



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	108.5	3.2
10°-20°	309.6	9.1
20°-30°	465.9	13.6
30°-40°	559.2	16.4
40°-50°	584.4	17.1
50°-60°	544.7	15.9
60°-70°	446.7	13.1
70°-80°	301.0	8.8
80°-90°	98.0	2.9
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°	884.0	25.9
0°-40°	1443.1	42.2
0°-60°	2572.2	75.3
0°-90°	3418.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3418.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1147	1147	1147	1147	1147	
5°	1135	1139	1144	1145	1147	108
15°	1081	1088	1098	1108	1109	306
25°	985	991	1016	1031	1037	453
35°	851	862	893	924	937	532
45°	708	713	754	800	820	541
55°	543	553	605	662	689	481
65°	366	383	448	514	545	365
75°	196	218	290	355	381	206
85°	46	65	96	113	111	55
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1146.8	1146.8	1146.8	1146.8	1146.8
2.5°	1140.2	1143.5	1148.4	1150.0	1150.0
5°	1135.3	1138.6	1143.5	1145.1	1146.8
7.5°	1127.1	1130.4	1137.0	1140.2	1141.9
10°	1115.7	1119.0	1127.1	1132.0	1133.7
12.5°	1101.0	1104.2	1114.0	1120.6	1122.2
15°	1081.3	1087.9	1097.7	1107.5	1109.1
17.5°	1068.2	1066.6	1079.7	1091.1	1094.4
20°	1037.2	1045.3	1060.1	1073.2	1076.4
22.5°	1011.0	1017.5	1037.2	1051.9	1058.4
25°	984.8	991.4	1015.9	1030.6	1037.2
27.5°	952.1	961.9	984.8	1006.1	1014.3
30°	919.4	929.2	955.4	979.9	989.7
32.5°	886.7	898.1	925.9	952.1	963.5
35°	850.7	862.1	893.2	924.3	937.4
37.5°	813.0	827.8	860.5	894.8	909.6
40°	775.4	790.1	824.5	863.8	880.1
42.5°	744.3	750.9	790.1	832.7	849.0
45°	708.3	713.3	754.2	800.0	819.6
47.5°	656.0	674.0	718.2	768.9	788.5
50°	615.1	634.7	680.5	734.5	755.8
52.5°	580.7	593.8	644.5	698.5	723.1
55°	543.1	552.9	605.3	662.5	688.7
57.5°	497.3	515.3	567.7	626.6	652.7
60°	446.6	469.5	526.8	590.6	616.7
62.5°	413.9	427.0	489.1	552.9	582.4
65°	366.4	382.8	448.2	513.7	544.8
67.5°	327.2	343.5	410.6	476.0	507.1
70°	284.6	301.0	371.3	436.8	467.9
72.5°	235.6	258.5	332.1	397.5	430.2
75°	196.3	217.6	289.6	355.0	381.2
77.5°	152.1	179.9	247.0	301.0	320.6
80°	112.9	140.7	201.2	240.5	258.5
82.5°	76.9	104.7	150.5	179.9	189.8
85°	45.8	65.4	96.5	112.9	111.2
87.5°	21.3	27.8	39.3	39.3	37.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)