

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: P308852

Luminaire Tested: **22FCZ2-44HE-UNV-L82765-CP187-W2A-U-2700K**

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: P308852
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: 22FCZ2-44HE-UNV-L82765-CP187-W2A-U-2700K
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: 3417.0 lumens
Efficiency: N/A
Efficacy: 91.9 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

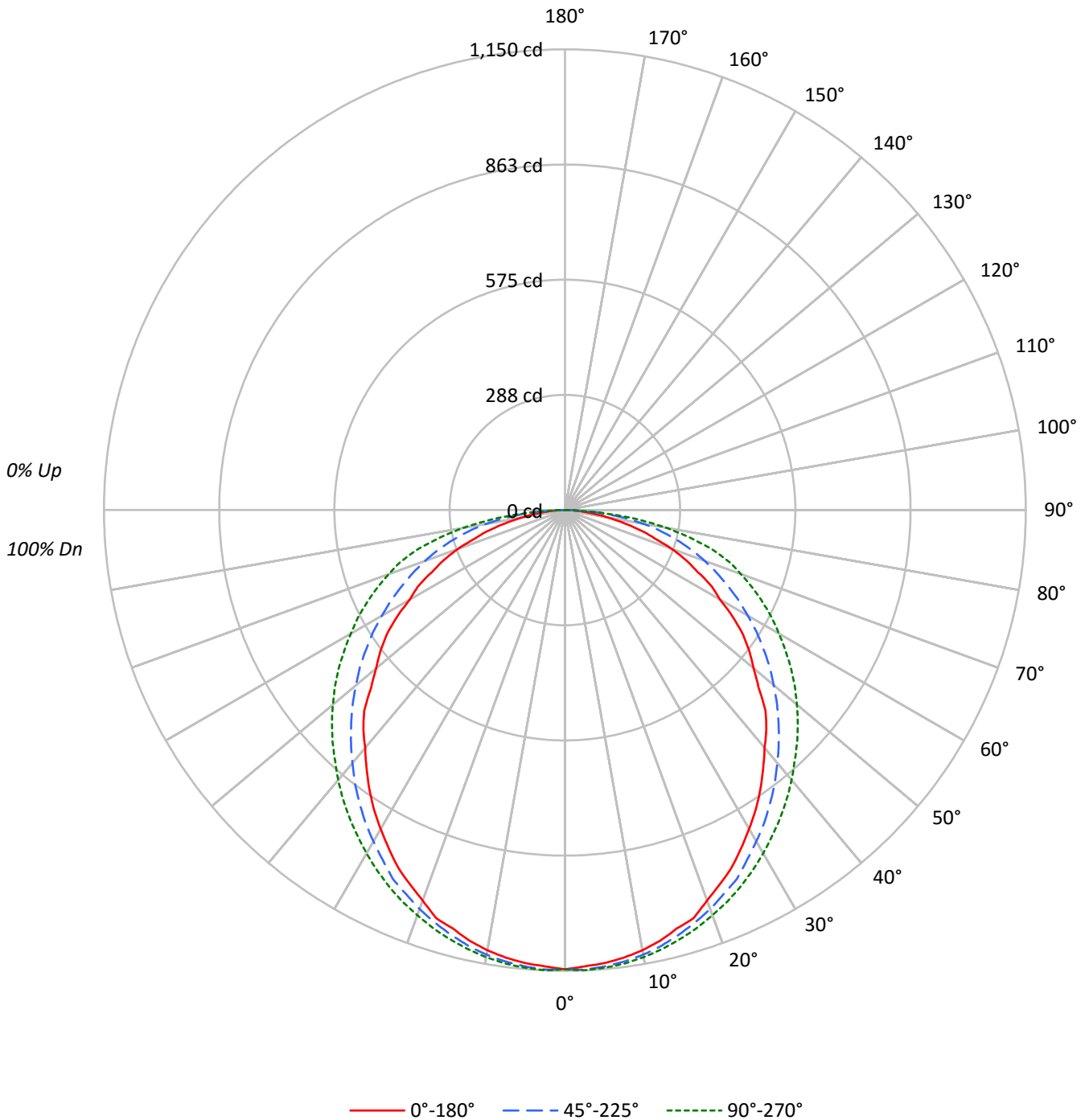
Input Watts (W): 37.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3085	3085	3085
5°	3066	3088	3097
10°	3048	3079	3097
15°	3012	3057	3089
20°	2969	3035	3082
25°	2923	3015	3079
30°	2856	2968	3074
35°	2794	2933	3078
40°	2723	2896	3091
45°	2695	2869	3118
50°	2574	2848	3163
55°	2548	2839	3230
60°	2403	2834	3319
65°	2332	2853	3468
70°	2239	2921	3680
75°	2041	3010	3962
80°	1748	3118	4004
85°	1414	2979	3433



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	108.5	3.2
10°-20°	309.5	9.1
20°-30°	465.8	13.6
30°-40°	559.0	16.4
40°-50°	584.3	17.1
50°-60°	544.5	15.9
60°-70°	446.6	13.1
70°-80°	300.9	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°	883.7	25.9
0°-40°	1442.7	42.2
0°-60°	2571.5	75.3
0°-90°	3417.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3417.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1146	1146	1146	1146	1146	
5°	1135	1138	1143	1145	1146	108
15°	1081	1088	1097	1107	1109	305
25°	984	991	1016	1030	1037	453
35°	850	862	893	924	937	532
45°	708	713	754	800	819	541
55°	543	553	605	662	688	481
65°	366	383	448	514	545	364
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°	1146.4	1146.4	1146.4	1146.4	1146.4
2.5°	1139.9	1143.2	1148.1	1149.7	1149.7
5°	1135.0	1138.3	1143.2	1144.8	1146.4
7.5°	1126.8	1130.1	1136.6	1139.9	1141.5
10°	1115.4	1118.6	1126.8	1131.7	1133.3
12.5°	1100.6	1103.9	1113.7	1120.3	1121.9
15°	1081.0	1087.6	1097.4	1107.2	1108.8
17.5°	1067.9	1066.3	1079.4	1090.8	1094.1
20°	1036.9	1045.0	1059.8	1072.8	1076.1
22.5°	1010.7	1017.2	1036.9	1051.6	1058.1
25°	984.5	991.1	1015.6	1030.3	1036.9
27.5°	951.8	961.6	984.5	1005.8	1014.0
30°	919.1	928.9	955.1	979.6	989.4
32.5°	886.4	897.8	925.7	951.8	963.3
35°	850.4	861.9	892.9	924.0	937.1
37.5°	812.8	827.5	860.2	894.6	909.3
40°	775.2	789.9	824.3	863.5	879.9
42.5°	744.1	750.7	789.9	832.4	848.8
45°	708.1	713.0	753.9	799.7	819.3
47.5°	655.8	673.8	718.0	768.6	788.3
50°	614.9	634.5	680.3	734.3	755.6
52.5°	580.6	593.7	644.4	698.3	722.9
55°	543.0	552.8	605.1	662.3	688.5
57.5°	497.2	515.2	567.5	626.4	652.5
60°	446.5	469.4	526.6	590.4	616.6
62.5°	413.8	426.8	489.0	552.8	582.2
65°	366.3	382.7	448.1	513.5	544.6
67.5°	327.1	343.4	410.5	475.9	507.0
70°	284.6	300.9	371.2	436.7	467.7
72.5°	235.5	258.4	332.0	397.4	430.1
75°	196.3	217.5	289.5	354.9	381.1
77.5°	152.1	179.9	246.9	300.9	320.5
80°	112.8	140.6	201.2	240.4	258.4
82.5°	76.9	104.7	150.5	179.9	189.7
85°	45.8	65.4	96.5	112.8	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)