

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: P308813

Luminaire Tested: **22FCZ2-39HE-UNV-L82765-CP187-W2A-U-5500K**

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: P308813
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-5500K
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: 3451.0 lumens
Efficiency: N/A
Efficacy: 103.6 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

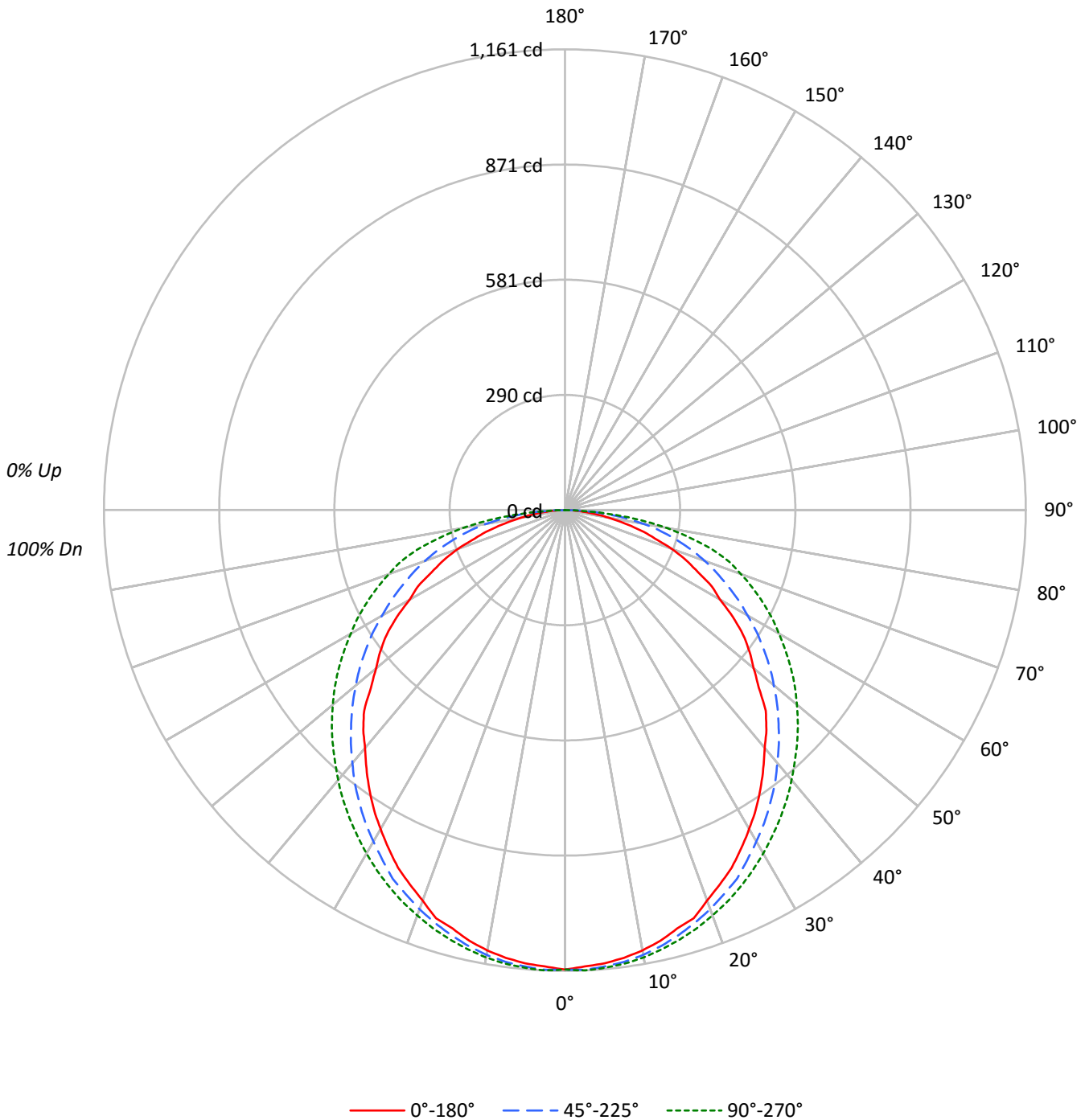
Input Watts (W): 33.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3116	3116	3116
5°	3096	3119	3128
10°	3078	3110	3128
15°	3042	3088	3120
20°	2999	3065	3112
25°	2952	3045	3109
30°	2884	2997	3105
35°	2822	2962	3109
40°	2750	2924	3121
45°	2722	2898	3149
50°	2600	2876	3195
55°	2573	2867	3263
60°	2427	2862	3351
65°	2356	2882	3502
70°	2261	2950	3717
75°	2061	3040	4001
80°	1767	3149	4045
85°	1426	3010	3467



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	109.6	3.2
10°-20°	312.5	9.1
20°-30°	470.4	13.6
30°-40°	564.6	16.4
40°-50°	590.1	17.1
50°-60°	549.9	15.9
60°-70°	451.0	13.1
70°-80°	303.9	8.8
80°-90°	99.0	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°	892.5	25.9
0°-40°	1457.1	42.2
0°-60°	2597.1	75.3
0°-90°	3451.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3451.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1158	1158	1158	1158	1158	
5°	1146	1150	1154	1156	1158	109
15°	1092	1098	1108	1118	1120	309
25°	994	1001	1026	1041	1047	457
35°	859	870	902	933	946	537
45°	715	720	761	808	828	546
55°	548	558	611	669	695	486
65°	370	386	453	519	550	368
75°	198	220	292	358	385	208
85°	46	66	98	114	112	55
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1157.8	1157.8	1157.8	1157.8	1157.8
2.5°	1151.2	1154.5	1159.5	1161.1	1161.1
5°	1146.3	1149.6	1154.5	1156.2	1157.8
7.5°	1138.0	1141.3	1147.9	1151.2	1152.9
10°	1126.5	1129.8	1138.0	1143.0	1144.6
12.5°	1111.6	1114.9	1124.8	1131.4	1133.1
15°	1091.8	1098.4	1108.3	1118.2	1119.9
17.5°	1078.6	1076.9	1090.1	1101.7	1105.0
20°	1047.2	1055.4	1070.3	1083.5	1086.8
22.5°	1020.7	1027.4	1047.2	1062.0	1068.6
25°	994.3	1000.9	1025.7	1040.6	1047.2
27.5°	961.3	971.2	994.3	1015.8	1024.1
30°	928.3	938.2	964.6	989.4	999.3
32.5°	895.2	906.8	934.9	961.3	972.8
35°	858.9	870.4	901.8	933.2	946.4
37.5°	820.9	835.8	868.8	903.5	918.3
40°	782.9	797.8	832.5	872.1	888.6
42.5°	751.5	758.1	797.8	840.7	857.2
45°	715.2	720.1	761.4	807.7	827.5
47.5°	662.3	680.5	725.1	776.3	796.1
50°	621.0	640.9	687.1	741.6	763.1
52.5°	586.4	599.6	650.8	705.3	730.1
55°	548.4	558.3	611.1	668.9	695.4
57.5°	502.1	520.3	573.1	632.6	659.0
60°	450.9	474.0	531.8	596.3	622.7
62.5°	417.9	431.1	493.9	558.3	588.0
65°	370.0	386.5	452.6	518.6	550.0
67.5°	330.3	346.9	414.6	480.6	512.0
70°	287.4	303.9	374.9	441.0	472.4
72.5°	237.8	261.0	335.3	401.4	434.4
75°	198.2	219.7	292.4	358.4	384.8
77.5°	153.6	181.7	249.4	303.9	323.7
80°	114.0	142.0	203.2	242.8	261.0
82.5°	77.6	105.7	152.0	181.7	191.6
85°	46.2	66.1	97.5	114.0	112.3
87.5°	21.5	28.1	39.6	39.6	38.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)