

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: P312864

Luminaire Tested: **22FCZ2-39HE-UNV-L83050-CP250-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: P312864
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-L83050-CP250-W2A-U-5000K
Description: 2'X2' TROFFER LED MODULE, RIBBED LENS, 0.250" POLYCARB SHEET
Light Source: (168) 5000K 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: 3489.0 lumens
Efficiency: N/A
Efficacy: 102.6 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

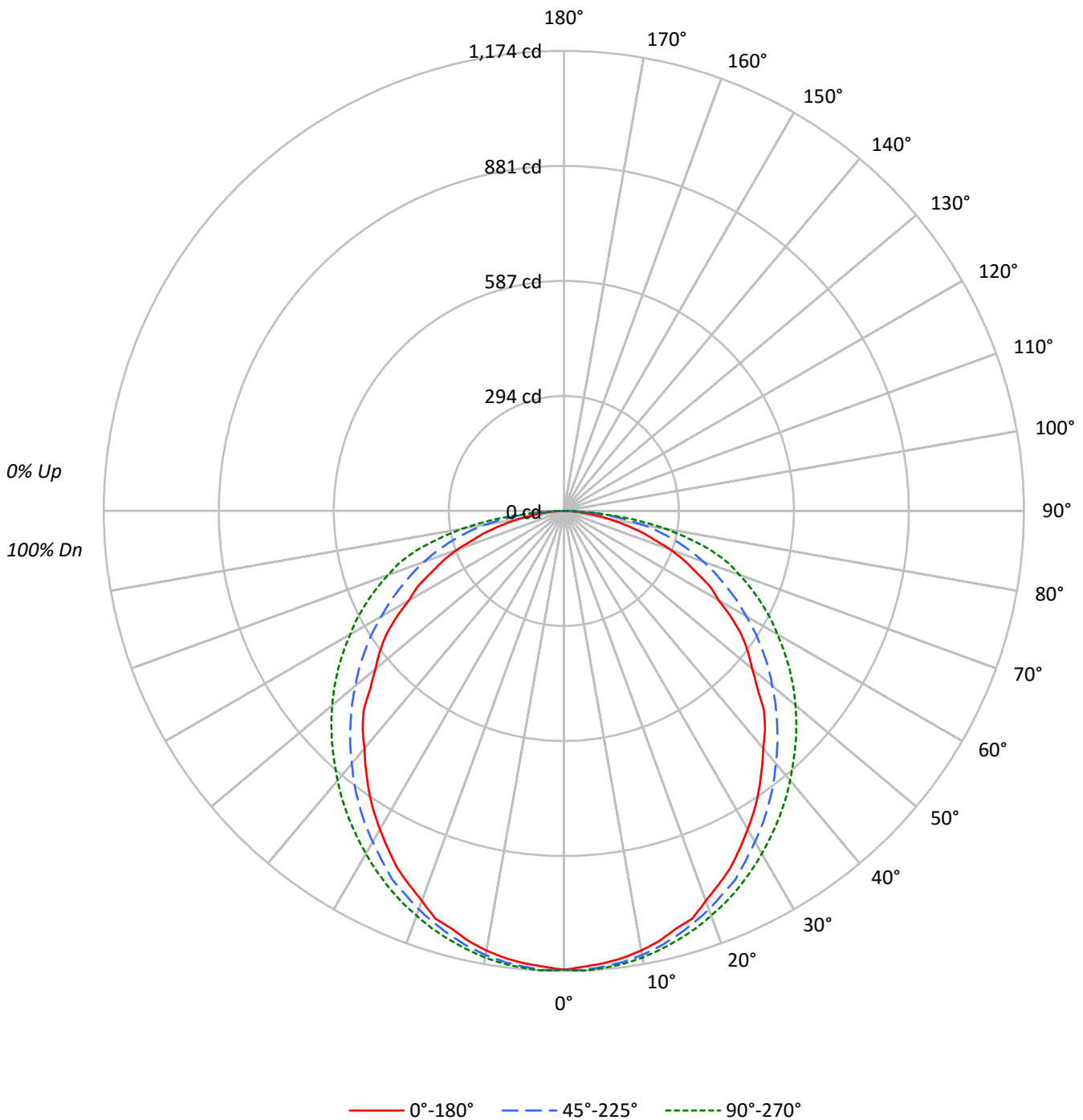
Input Watts (W): 34
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3150	3150	3150
5°	3130	3153	3162
10°	3112	3144	3162
15°	3075	3122	3154
20°	3032	3099	3147
25°	2985	3079	3143
30°	2916	3030	3139
35°	2852	2995	3143
40°	2780	2956	3156
45°	2752	2930	3184
50°	2629	2908	3230
55°	2601	2899	3298
60°	2454	2894	3388
65°	2382	2913	3541
70°	2286	2983	3758
75°	2084	3073	4046
80°	1785	3183	4088
85°	1445	3041	3507



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	110.8	3.2
10°-20°	316.0	9.1
20°-30°	475.6	13.6
30°-40°	570.8	16.4
40°-50°	596.6	17.1
50°-60°	556.0	15.9
60°-70°	456.0	13.1
70°-80°	307.3	8.8
80°-90°	100.1	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°	902.3	25.9
0°-40°	1473.1	42.2
0°-60°	2625.7	75.3
0°-90°	3489.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3489.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1171	1171	1171	1171	1171	
5°	1159	1162	1167	1169	1171	110
15°	1104	1110	1120	1130	1132	312
25°	1005	1012	1037	1052	1059	462
35°	868	880	912	944	957	543
45°	723	728	770	817	837	552
55°	554	564	618	676	703	491
65°	374	391	458	524	556	372
75°	200	222	296	362	389	211
85°	47	67	98	115	114	56
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1170.6	1170.6	1170.6	1170.6	1170.6
2.5°	1163.9	1167.2	1172.3	1173.9	1173.9
5°	1158.9	1162.2	1167.2	1168.9	1170.6
7.5°	1150.6	1153.9	1160.6	1163.9	1165.6
10°	1138.9	1142.2	1150.6	1155.6	1157.2
12.5°	1123.8	1127.2	1137.2	1143.9	1145.5
15°	1103.8	1110.5	1120.5	1130.5	1132.2
17.5°	1090.4	1088.8	1102.1	1113.8	1117.2
20°	1058.7	1067.1	1082.1	1095.4	1098.8
22.5°	1032.0	1038.7	1058.7	1073.7	1080.4
25°	1005.3	1012.0	1037.0	1052.0	1058.7
27.5°	971.9	981.9	1005.3	1027.0	1035.3
30°	938.5	948.5	975.2	1000.3	1010.3
32.5°	905.1	916.8	945.2	971.9	983.6
35°	868.3	880.0	911.8	943.5	956.8
37.5°	829.9	845.0	878.4	913.4	928.5
40°	791.5	806.6	841.6	881.7	898.4
42.5°	759.8	766.5	806.6	850.0	866.7
45°	723.1	728.1	769.8	816.6	836.6
47.5°	669.6	688.0	733.1	784.8	804.9
50°	627.9	647.9	694.7	749.8	771.5
52.5°	592.8	606.2	657.9	713.0	738.1
55°	554.4	564.4	617.9	676.3	703.0
57.5°	507.6	526.0	579.4	639.6	666.3
60°	455.9	479.3	537.7	602.8	629.5
62.5°	422.5	435.8	499.3	564.4	594.5
65°	374.1	390.8	457.5	524.3	556.1
67.5°	334.0	350.7	419.1	485.9	517.7
70°	290.6	307.3	379.1	445.9	477.6
72.5°	240.5	263.8	339.0	405.8	439.2
75°	200.4	222.1	295.6	362.4	389.1
77.5°	155.3	183.7	252.2	307.3	327.3
80°	115.2	143.6	205.4	245.5	263.8
82.5°	78.5	106.9	153.6	183.7	193.7
85°	46.8	66.8	98.5	115.2	113.6
87.5°	21.7	28.4	40.1	40.1	38.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)