

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: P308821

Luminaire Tested: **22FCZ2-39HE-UNV-L82765-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: P308821
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-CP250-W2A-U-5000K
Description: 2'X2' TROFFER LED MODULE, RIBBED LENS, 0.250" 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: 3390.0 lumens
Efficiency: N/A
Efficacy: 102.1 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

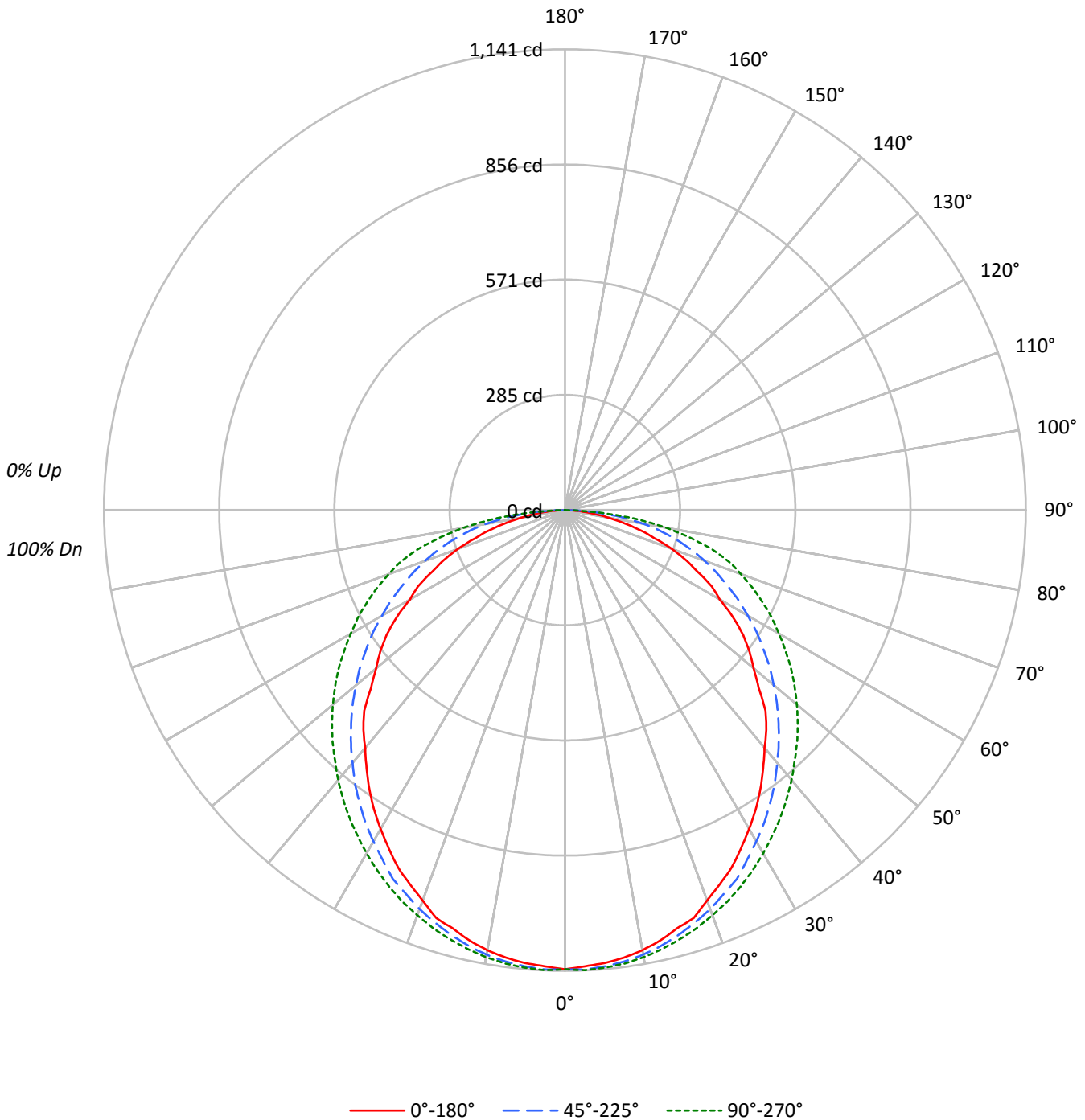
Input Watts (W): 33.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3061	3061	3061
5°	3042	3063	3072
10°	3024	3055	3072
15°	2988	3033	3065
20°	2946	3011	3057
25°	2900	2992	3054
30°	2833	2944	3050
35°	2772	2910	3054
40°	2702	2872	3066
45°	2673	2847	3094
50°	2554	2826	3138
55°	2527	2816	3205
60°	2384	2812	3292
65°	2314	2831	3440
70°	2221	2898	3651
75°	2024	2986	3930
80°	1736	3093	3973
85°	1402	2955	3406



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	107.6	3.2
10°-20°	307.0	9.1
20°-30°	462.1	13.6
30°-40°	554.6	16.4
40°-50°	579.7	17.1
50°-60°	540.2	15.9
60°-70°	443.0	13.1
70°-80°	298.5	8.8
80°-90°	97.2	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°	876.7	25.9
0°-40°	1431.3	42.2
0°-60°	2551.2	75.3
0°-90°	3390.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3390.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1137	1137	1137	1137	1137	
5°	1126	1129	1134	1136	1137	107
15°	1072	1079	1089	1098	1100	303
25°	977	983	1008	1022	1029	449
35°	844	855	886	917	930	527
45°	702	707	748	793	813	537
55°	539	548	600	657	683	477
65°	363	380	445	510	540	362
75°	195	216	287	352	378	205
85°	45	65	96	112	110	54
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1137.4	1137.4	1137.4	1137.4	1137.4
2.5°	1130.9	1134.1	1139.0	1140.6	1140.6
5°	1126.0	1129.3	1134.1	1135.8	1137.4
7.5°	1117.9	1121.1	1127.6	1130.9	1132.5
10°	1106.5	1109.8	1117.9	1122.8	1124.4
12.5°	1091.9	1095.2	1104.9	1111.4	1113.0
15°	1072.5	1079.0	1088.7	1098.4	1100.1
17.5°	1059.5	1057.9	1070.9	1082.2	1085.5
20°	1028.7	1036.8	1051.4	1064.4	1067.6
22.5°	1002.7	1009.2	1028.7	1043.3	1049.8
25°	976.7	983.2	1007.6	1022.2	1028.7
27.5°	944.3	954.0	976.7	997.8	1006.0
30°	911.8	921.6	947.5	971.9	981.6
32.5°	879.4	890.8	918.3	944.3	955.7
35°	843.7	855.1	885.9	916.7	929.7
37.5°	806.4	821.0	853.4	887.5	902.1
40°	769.1	783.7	817.7	856.7	872.9
42.5°	738.2	744.7	783.7	825.9	842.1
45°	702.5	707.4	748.0	793.4	812.9
47.5°	650.6	668.5	712.3	762.6	782.0
50°	610.1	629.5	675.0	728.5	749.6
52.5°	576.0	589.0	639.3	692.8	717.1
55°	538.7	548.4	600.3	657.1	683.1
57.5°	493.2	511.1	563.0	621.4	647.4
60°	442.9	465.7	522.4	585.7	611.7
62.5°	410.5	423.5	485.1	548.4	577.6
65°	363.4	379.7	444.6	509.5	540.3
67.5°	324.5	340.7	407.2	472.1	503.0
70°	282.3	298.5	368.3	433.2	464.0
72.5°	233.6	256.4	329.4	394.3	426.7
75°	194.7	215.8	287.2	352.1	378.0
77.5°	150.9	178.5	245.0	298.5	318.0
80°	112.0	139.5	199.6	238.5	256.4
82.5°	76.3	103.8	149.3	178.5	188.2
85°	45.4	64.9	95.7	112.0	110.3
87.5°	21.1	27.6	38.9	38.9	37.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)