

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: P313010

Luminaire Tested: **22FCZ2-39HE-UNV-L83050-S-CP250-W2A-U-3000K**

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: P313010
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-23)
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-S-CP250-W2A-U-3000K
Description: 2'X2' TROFFER LED MODULE, SMOOTH 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: 3281.0 lumens
Efficiency: N/A
Efficacy: 101.6 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 1.26 / 1.34
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

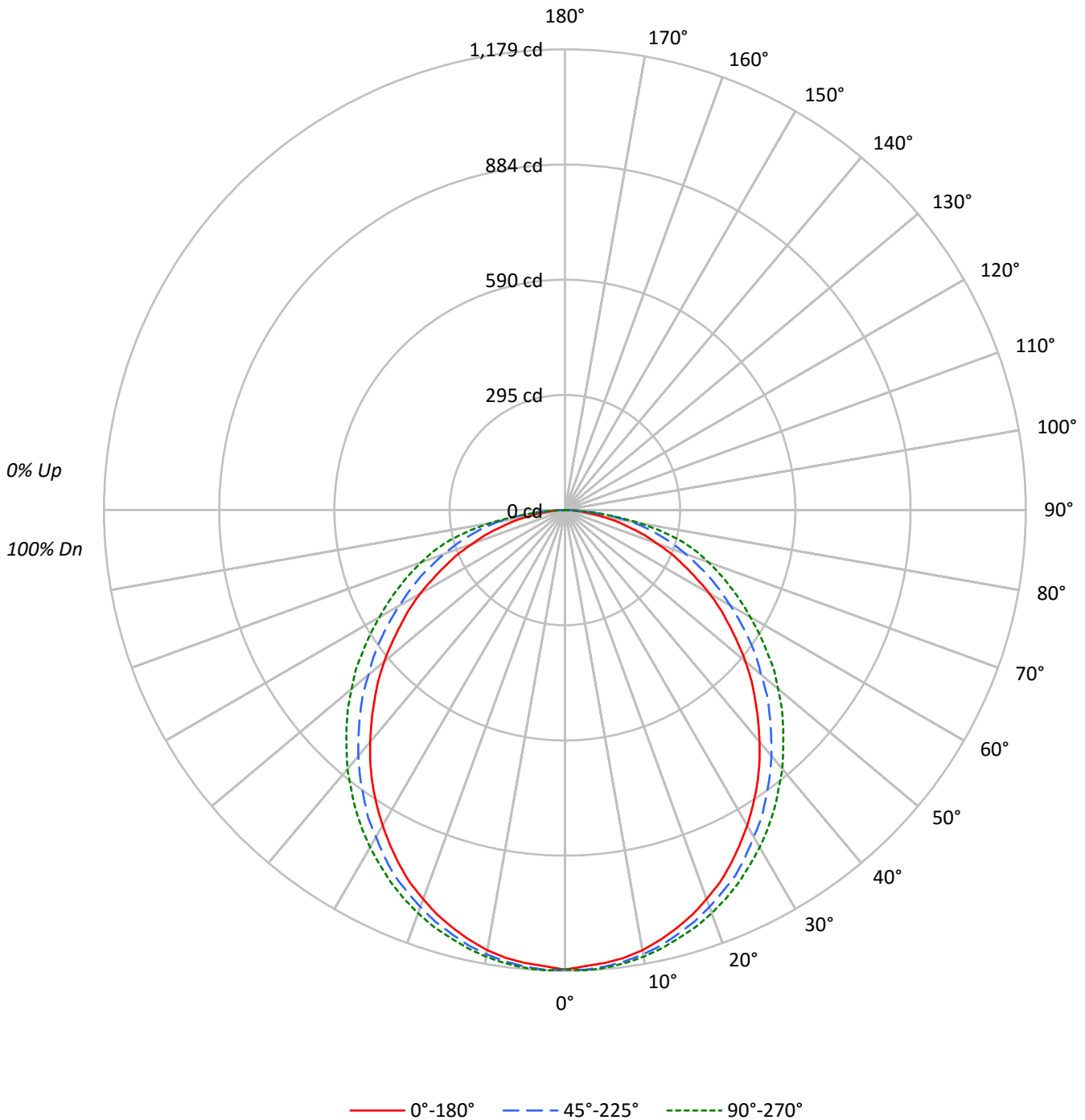
Input Watts (W): 32.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83
2	98	90	83	77	96	88	82	76	84	79	74	81	77	73	78	74	71	69
3	90	79	71	64	87	77	70	63	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	69	60	54	66	59	53	64	57	52	61	56	52	49
5	75	62	53	47	73	61	53	46	59	52	46	57	51	45	55	50	45	43
6	70	56	47	41	68	55	47	41	53	46	40	52	45	40	50	44	39	37
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	28	27
10	53	40	32	26	51	39	31	26	38	31	26	37	31	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3164	3164	3164
5°	3143	3167	3176
10°	3125	3154	3171
15°	3083	3126	3156
20°	3033	3095	3143
25°	2973	3064	3123
30°	2897	3002	3097
35°	2816	2947	3068
40°	2721	2888	3038
45°	2622	2820	3006
50°	2525	2743	2980
55°	2406	2693	2959
60°	2299	2628	2949
65°	2145	2613	2982
70°	1976	2589	3072
75°	1783	2626	3231
80°	1542	2704	3036
85°	1275	2269	2269



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	111.2	3.4
10°-20°	316.4	9.6
20°-30°	473.4	14.4
30°-40°	560.7	17.1
40°-50°	571.4	17.4
50°-60°	512.1	15.6
60°-70°	400.9	12.2
70°-80°	258.5	7.9
80°-90°	76.4	2.3
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°	901.0	27.5
0°-40°	1461.7	44.5
0°-60°	2545.2	77.6
0°-90°	3281.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3281.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1176	1176	1176	1176	1176	
5°	1163	1166	1173	1174	1176	110
15°	1107	1113	1122	1131	1133	312
25°	1001	1010	1032	1046	1052	461
35°	857	868	897	925	934	536
45°	689	704	741	779	790	532
55°	513	530	574	614	631	460
65°	337	357	410	450	468	335
75°	172	198	253	296	311	184
85°	41	57	74	74	74	49
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1175.7	1175.7	1175.7	1175.7	1175.7
2.5°	1168.0	1171.1	1177.2	1178.7	1178.7
5°	1163.4	1166.5	1172.6	1174.2	1175.7
7.5°	1155.8	1157.3	1165.0	1168.0	1169.6
10°	1143.5	1146.6	1154.3	1158.8	1160.4
12.5°	1126.7	1131.3	1140.5	1146.6	1148.1
15°	1106.8	1112.9	1122.1	1131.3	1132.8
17.5°	1085.4	1091.5	1103.7	1114.5	1117.5
20°	1059.3	1067.0	1080.8	1093.0	1097.6
22.5°	1033.3	1039.4	1056.3	1071.6	1076.2
25°	1001.2	1010.4	1031.8	1045.6	1051.7
27.5°	967.5	978.2	999.6	1018.0	1024.1
30°	932.3	943.0	966.0	988.9	996.6
32.5°	895.5	907.8	935.3	958.3	966.0
35°	857.3	868.0	897.1	924.6	933.8
37.5°	817.5	826.7	860.3	889.4	898.6
40°	774.6	786.9	822.1	855.7	864.9
42.5°	731.7	745.5	780.7	817.5	826.7
45°	688.9	704.2	740.9	779.2	789.9
47.5°	647.5	659.8	701.1	737.9	753.2
50°	603.2	615.4	655.2	696.5	711.8
52.5°	557.2	574.1	616.9	656.7	675.1
55°	512.8	529.7	574.1	613.9	630.7
57.5°	471.5	485.3	531.2	572.5	589.4
60°	427.1	439.4	488.3	532.7	548.0
62.5°	379.6	398.0	448.5	489.9	508.2
65°	336.8	356.7	410.3	450.1	468.4
67.5°	297.0	315.4	367.4	410.3	430.2
70°	251.1	275.6	329.1	372.0	390.4
72.5°	214.3	235.7	290.9	333.7	353.6
75°	171.5	197.5	252.6	295.5	310.8
77.5°	136.2	162.3	214.3	248.0	255.7
80°	99.5	125.5	174.5	191.4	195.9
82.5°	67.4	91.9	125.5	130.1	131.7
85°	41.3	56.6	73.5	73.5	73.5
87.5°	19.9	23.0	26.0	24.5	24.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)