

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: P312963

Luminaire Tested: **22FCZ2-29HE-UNV-L83050-S-CP250-W2A-U-4500K**

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: P312963
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: 22FCZ2-29HE-UNV-L83050-S-CP250-W2A-U-4500K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.250" POLYCARB SHEET
Light Source: (168) 4500K 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: 2663.0 lumens
Efficiency: N/A
Efficacy: 113.3 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

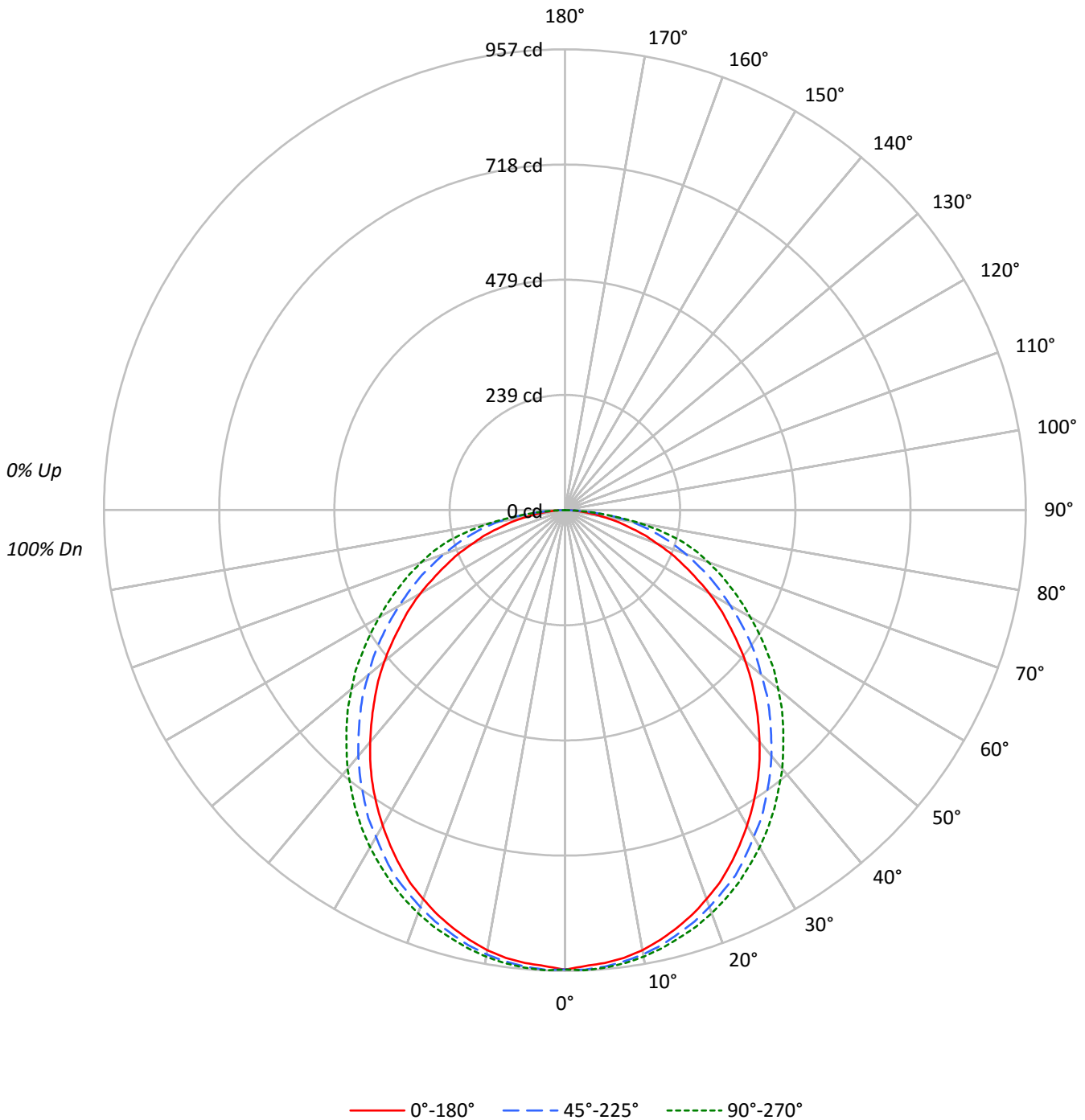
Input Watts (W): 23.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2568	2568	2568
5°	2551	2571	2578
10°	2536	2560	2573
15°	2503	2537	2561
20°	2462	2512	2551
25°	2413	2486	2534
30°	2351	2436	2513
35°	2286	2392	2490
40°	2209	2344	2466
45°	2128	2289	2440
50°	2049	2226	2419
55°	1953	2186	2402
60°	1866	2133	2394
65°	1740	2120	2421
70°	1603	2102	2493
75°	1447	2131	2622
80°	1252	2194	2464
85°	1034	1840	1840



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	90.2	3.4
10°-20°	256.8	9.6
20°-30°	384.3	14.4
30°-40°	455.1	17.1
40°-50°	463.8	17.4
50°-60°	415.6	15.6
60°-70°	325.4	12.2
70°-80°	209.8	7.9
80°-90°	62.0	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°	731.3	27.5
0°-40°	1186.3	44.5
0°-60°	2065.7	77.6
0°-90°	2663.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2663.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	954	954	954	954	954	
5°	944	947	952	953	954	90
15°	898	903	911	918	919	253
25°	813	820	837	849	854	374
35°	696	704	728	750	758	435
45°	559	572	601	632	641	432
55°	416	430	466	498	512	373
65°	273	290	333	365	380	272
75°	139	160	205	240	252	149
85°	34	46	60	60	60	39
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	954.2	954.2	954.2	954.2	954.2
2.5°	948.0	950.5	955.5	956.7	956.7
5°	944.3	946.8	951.8	953.0	954.2
7.5°	938.1	939.3	945.5	948.0	949.3
10°	928.1	930.6	936.8	940.6	941.8
12.5°	914.5	918.2	925.7	930.6	931.9
15°	898.3	903.3	910.7	918.2	919.4
17.5°	880.9	885.9	895.8	904.5	907.0
20°	859.8	866.0	877.2	887.1	890.9
22.5°	838.7	843.7	857.3	869.7	873.5
25°	812.6	820.0	837.4	848.6	853.6
27.5°	785.3	794.0	811.3	826.3	831.2
30°	756.7	765.4	784.0	802.7	808.9
32.5°	726.9	736.8	759.2	777.8	784.0
35°	695.8	704.5	728.1	750.5	757.9
37.5°	663.5	670.9	698.3	721.9	729.3
40°	628.7	638.6	667.2	694.6	702.0
42.5°	593.9	605.1	633.7	663.5	670.9
45°	559.1	571.5	601.4	632.4	641.1
47.5°	525.6	535.5	569.1	598.9	611.3
50°	489.5	499.5	531.8	565.3	577.8
52.5°	452.3	465.9	500.7	533.0	547.9
55°	416.2	429.9	465.9	498.2	511.9
57.5°	382.7	393.9	431.1	464.7	478.4
60°	346.7	356.6	396.4	432.4	444.8
62.5°	308.1	323.0	364.1	397.6	412.5
65°	273.3	289.5	333.0	365.3	380.2
67.5°	241.0	256.0	298.2	333.0	349.1
70°	203.8	223.6	267.1	301.9	316.8
72.5°	173.9	191.3	236.1	270.9	287.0
75°	139.2	160.3	205.0	239.8	252.2
77.5°	110.6	131.7	173.9	201.3	207.5
80°	80.8	101.9	141.6	155.3	159.0
82.5°	54.7	74.5	101.9	105.6	106.9
85°	33.5	46.0	59.6	59.6	59.6
87.5°	16.2	18.6	21.1	19.9	19.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)