

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: P314203

Luminaire Tested: **24FCZ2-30-UNV-L83050-S-CP125-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: P314203
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-30-UNV-L83050-S-CP125-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" 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: 3018.0 lumens
Efficiency: N/A
Efficacy: 123.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.27 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

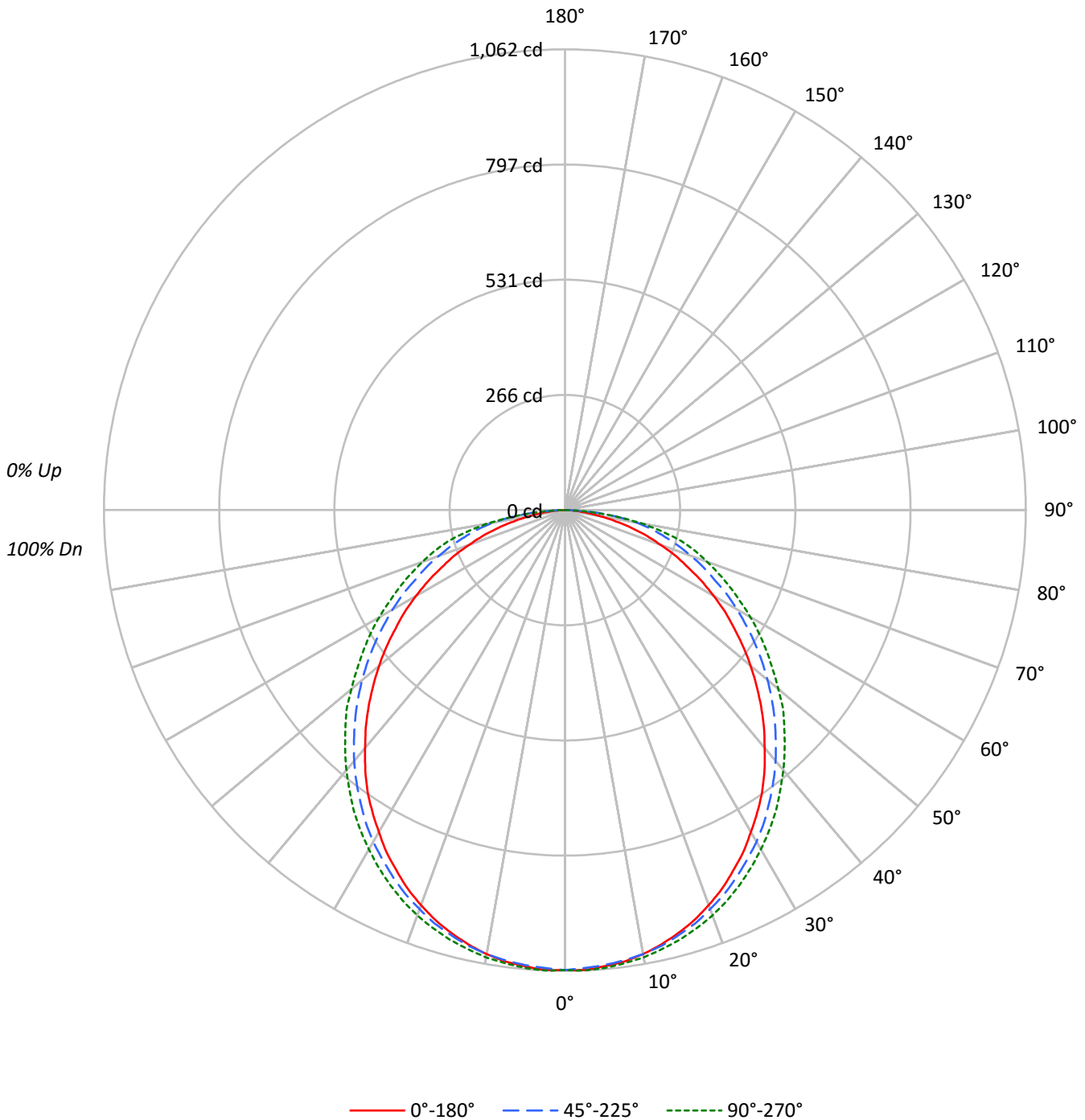
Input Watts (W): 24.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1426	1426	1426
5°	1425	1422	1431
10°	1420	1420	1430
15°	1406	1413	1427
20°	1388	1401	1423
25°	1362	1388	1415
30°	1331	1372	1403
35°	1302	1349	1392
40°	1258	1327	1376
45°	1217	1301	1361
50°	1170	1276	1344
55°	1118	1253	1331
60°	1065	1233	1329
65°	998	1212	1337
70°	924	1218	1373
75°	827	1241	1450
80°	669	1315	1419
85°	503	1155	1125



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	100.4	3.3
10°-20°	286.8	9.5
20°-30°	431.1	14.3
30°-40°	513.5	17.0
40°-50°	525.6	17.4
50°-60°	473.2	15.7
60°-70°	371.6	12.3
70°-80°	241.2	8.0
80°-90°	74.6	2.5
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°	818.3	27.1
0°-40°	1331.9	44.1
0°-60°	2330.6	77.2
0°-90°	3018.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3018.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1060	1060	1060	1060	1060	
5°	1055	1057	1053	1058	1059	100
15°	1009	1012	1014	1023	1025	285
25°	917	925	935	950	953	423
35°	793	802	822	842	847	495
45°	639	655	684	709	715	493
55°	476	498	534	562	568	427
65°	314	337	381	412	420	312
75°	159	190	239	271	279	168
85°	33	60	75	73	73	39
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1060.2	1060.2	1060.2	1060.2	1060.2
2.5°	1061.2	1061.2	1056.4	1061.2	1062.2
5°	1055.4	1057.4	1052.6	1058.3	1059.3
7.5°	1049.7	1049.7	1046.8	1052.6	1053.5
10°	1039.2	1040.1	1039.2	1045.9	1046.8
12.5°	1025.7	1027.6	1028.6	1035.3	1036.3
15°	1009.4	1012.3	1014.2	1022.9	1024.8
17.5°	991.2	994.1	998.9	1008.5	1010.4
20°	969.2	973.0	978.8	991.2	994.1
22.5°	945.2	949.0	958.6	970.1	974.9
25°	917.4	925.1	934.7	950.0	952.9
27.5°	889.6	896.3	908.8	925.1	928.9
30°	857.0	867.6	882.9	899.2	903.0
32.5°	825.4	835.9	854.1	871.4	876.2
35°	792.8	802.4	821.5	841.7	847.4
37.5°	755.4	767.9	789.0	809.1	814.8
40°	716.1	731.4	755.4	776.5	783.2
42.5°	678.7	695.0	719.0	742.0	749.6
45°	639.4	654.7	683.5	709.4	715.1
47.5°	599.1	616.4	647.1	673.0	682.5
50°	558.9	577.1	609.7	636.5	642.3
52.5°	518.6	537.8	572.3	601.1	603.9
55°	476.4	497.5	534.0	561.8	567.5
57.5°	438.1	456.3	495.6	524.4	531.1
60°	395.9	416.0	458.2	485.1	493.7
62.5°	355.7	376.7	420.8	447.7	455.3
65°	313.5	337.4	380.6	412.2	419.9
67.5°	277.0	300.1	346.1	376.7	384.4
70°	234.9	260.7	309.6	341.3	348.9
72.5°	198.4	225.3	274.2	304.8	316.3
75°	159.1	189.8	238.7	271.3	279.0
77.5°	120.8	156.3	206.1	231.0	231.0
80°	86.3	123.7	169.7	181.2	183.1
82.5°	56.6	93.0	125.6	124.6	124.6
85°	32.6	60.4	74.8	72.9	72.9
87.5°	12.5	24.9	26.8	26.8	25.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)