

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: P313827

Luminaire Tested: **24FCZ2-30-UNV-L83050-CP125-W2A-U-4000K**

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: P313827
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-15)
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-CP125-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" POLYCARB SHEET
Light Source: (168) 4000K 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: 2845.0 lumens
Efficiency: N/A
Efficacy: 119.0 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

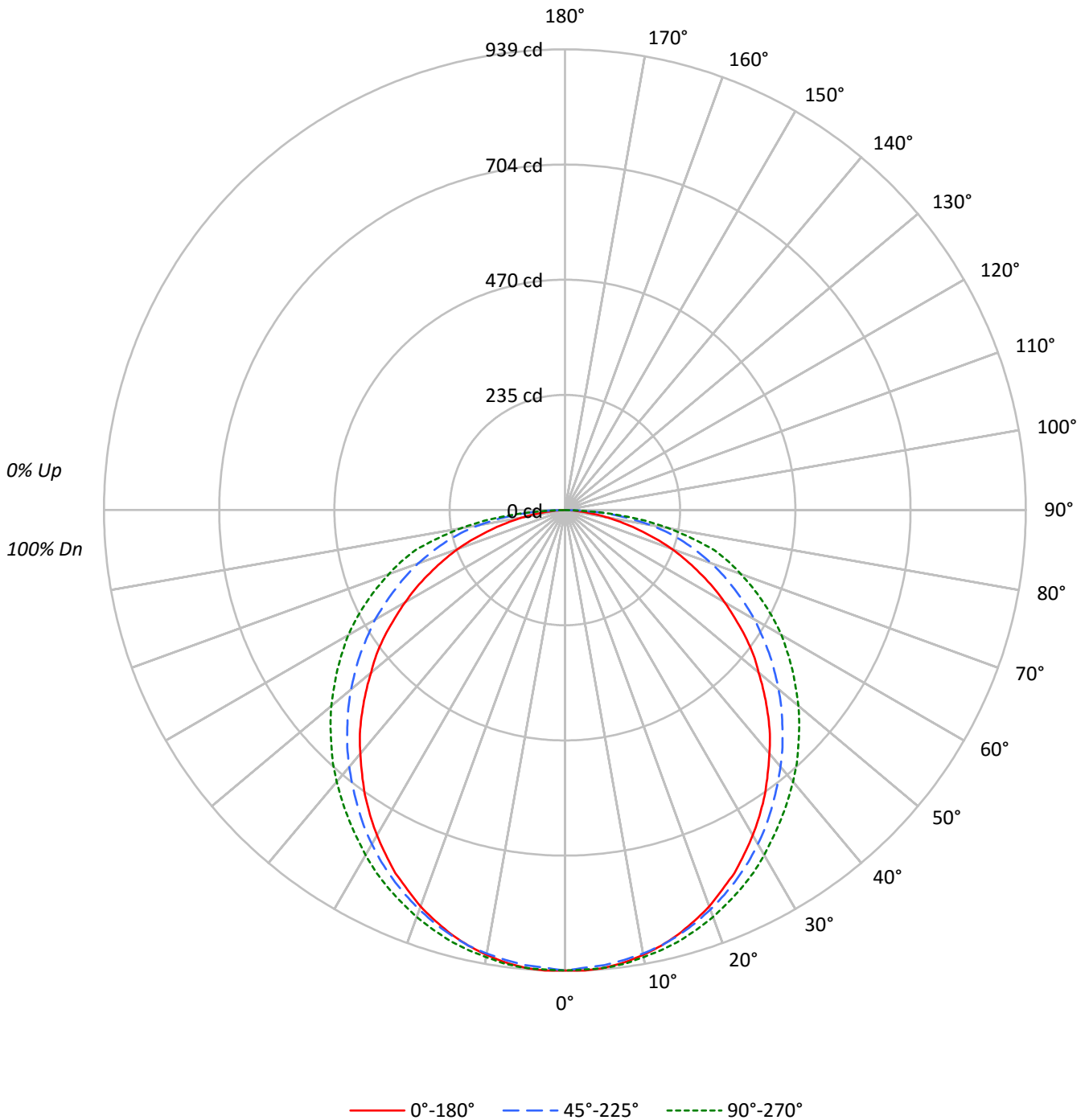
Input Watts (W): 23.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	92	89	92	89	87	88	86	84	82
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56
4	81	68	59	52	79	67	58	52	64	57	51	62	56	50	60	54	50	47
5	74	61	52	45	72	60	51	44	58	50	44	56	49	43	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	64	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	37	31	57	45	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1262	1262	1262
5°	1265	1257	1265
10°	1257	1254	1264
15°	1246	1249	1265
20°	1231	1241	1264
25°	1212	1232	1263
30°	1189	1222	1261
35°	1166	1209	1262
40°	1139	1200	1270
45°	1112	1193	1281
50°	1079	1189	1300
55°	1052	1191	1326
60°	1011	1202	1372
65°	965	1214	1422
70°	913	1251	1500
75°	815	1305	1639
80°	695	1382	1675
85°	496	1369	1602



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	88.8	3.1
10°-20°	253.9	8.9
20°-30°	383.5	13.5
30°-40°	462.2	16.2
40°-50°	485.2	17.1
50°-60°	453.9	16.0
60°-70°	374.9	13.2
70°-80°	255.5	9.0
80°-90°	87.1	3.1
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°	726.2	25.5
0°-40°	1188.4	41.8
0°-60°	2127.5	74.8
0°-90°	2845.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2845.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	938	938	938	938	938	
5°	936	935	931	936	936	89
15°	895	896	897	906	908	252
25°	816	820	830	846	850	376
35°	710	717	736	761	768	444
45°	584	597	627	661	673	451
55°	448	466	508	549	565	400
65°	303	328	381	430	446	301
75°	157	193	251	298	315	167
85°	32	63	89	100	104	40
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	938.3	938.3	938.3	938.3	938.3
2.5°	939.2	938.3	933.5	938.3	937.3
5°	936.4	935.4	930.7	936.4	936.4
7.5°	929.8	929.8	925.0	931.6	932.6
10°	920.3	920.3	917.5	925.0	925.0
12.5°	909.0	909.0	909.0	916.5	917.5
15°	894.8	895.8	896.7	906.2	908.1
17.5°	877.8	879.7	882.6	893.9	895.8
20°	859.9	861.8	866.5	879.7	882.6
22.5°	837.3	842.0	848.6	863.7	866.5
25°	816.5	820.3	829.7	845.8	850.5
27.5°	791.0	796.7	808.9	825.9	832.5
30°	765.5	771.2	786.3	806.1	811.8
32.5°	738.1	746.6	762.7	783.5	790.1
35°	709.8	717.4	736.3	760.8	768.4
37.5°	678.7	689.1	709.8	736.3	745.7
40°	648.5	659.8	683.4	711.7	723.0
42.5°	618.3	629.6	656.0	688.1	699.4
45°	584.3	596.6	626.8	660.7	673.0
47.5°	550.3	565.4	598.4	634.3	647.5
50°	515.4	532.4	568.2	606.0	621.1
52.5°	484.2	500.3	538.0	578.6	592.8
55°	448.4	466.3	507.8	549.4	565.4
57.5°	411.5	431.4	475.7	521.0	537.1
60°	375.7	397.4	446.5	491.8	509.7
62.5°	340.8	362.5	413.4	460.6	478.6
65°	303.0	328.5	381.3	429.5	446.5
67.5°	267.1	294.5	350.2	397.4	414.4
70°	232.2	258.6	318.1	364.4	381.3
72.5°	194.4	224.7	284.1	332.3	350.2
75°	156.7	192.6	251.1	298.3	315.3
77.5°	121.8	158.6	217.1	255.8	264.3
80°	89.7	127.4	178.4	205.8	216.2
82.5°	57.6	95.3	135.9	155.7	164.2
85°	32.1	63.2	88.7	100.1	103.8
87.5°	13.2	27.4	35.9	40.6	40.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)