

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: P310503

Luminaire Tested: **24FCZ2-30HE-UNV-L82765-CA125-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: P310503
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: 24FCZ2-30HE-UNV-L82765-CA125-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" ACRYLIC SHEET
Light Source: (336) 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: 2841.0 lumens
Efficiency: N/A
Efficacy: 132.1 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

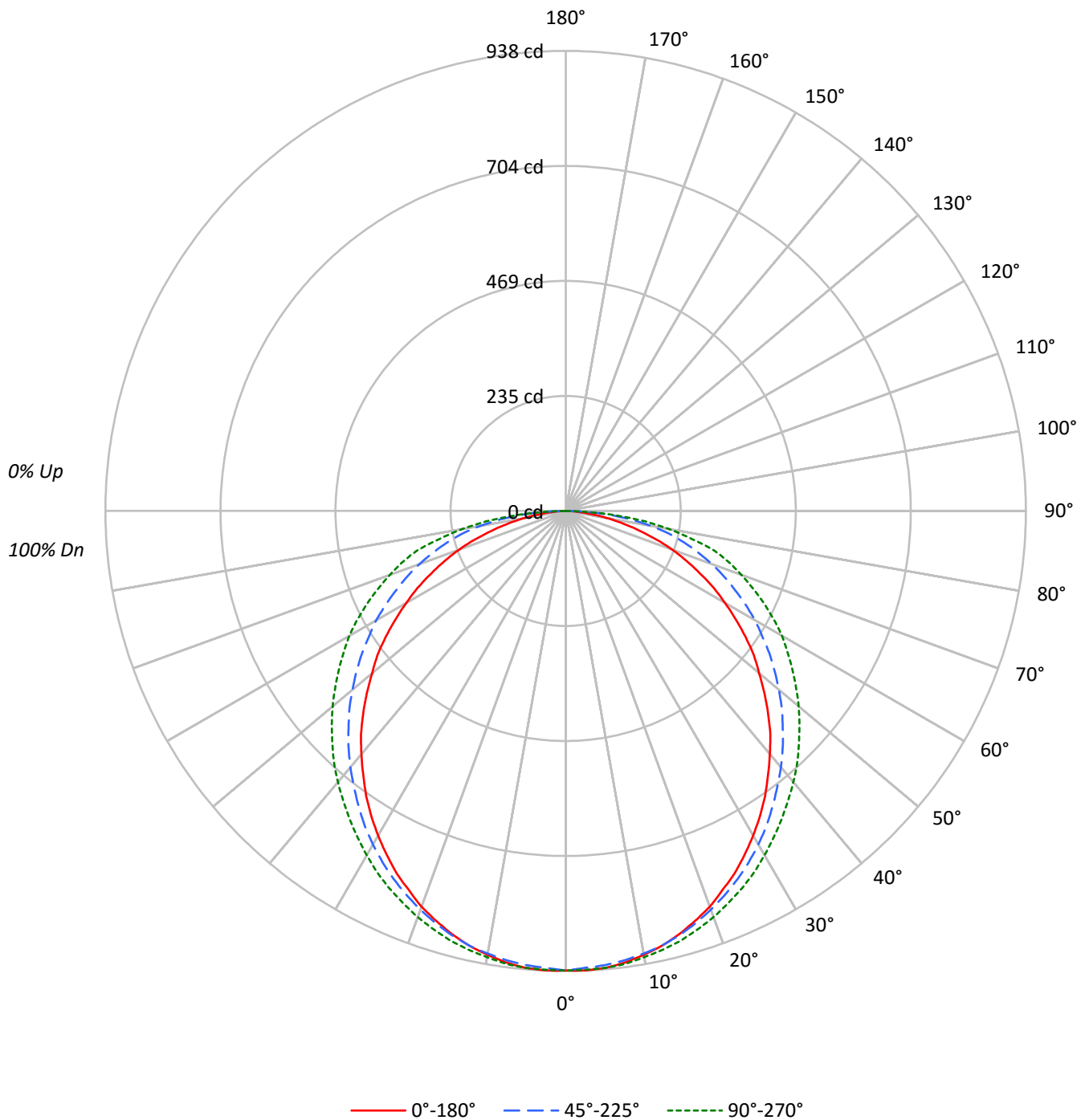
Input Watts (W): 21.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				0
RW	70	50	30	10	70	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		100
1	108	103	98	94	105	100	96	92	96	92	89		92	89	87		82
2	98	89	81	75	95	87	80	74	83	78	73		80	75	71		67
3	89	77	69	62	86	76	68	61	73	66	60		70	64	59		56
4	81	68	59	52	79	67	58	52	64	57	51		62	56	50		47
5	74	61	52	45	72	60	51	44	58	50	44		56	49	43		41
6	69	55	46	39	67	54	45	39	52	44	38		50	43	38		36
7	64	50	41	34	62	49	40	34	47	39	34		46	39	34		31
8	59	45	37	31	57	45	36	30	43	36	30		42	35	30		28
9	55	41	33	27	54	41	33	27	40	32	27		39	32	27		25
10	52	38	30	25	50	38	30	25	37	30	25		36	29	25		23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1261	1261	1261
5°	1263	1255	1263
10°	1256	1252	1262
15°	1245	1247	1263
20°	1230	1239	1262
25°	1210	1230	1261
30°	1188	1220	1259
35°	1164	1208	1260
40°	1137	1199	1268
45°	1110	1191	1279
50°	1077	1188	1298
55°	1050	1190	1324
60°	1010	1200	1370
65°	963	1212	1419
70°	912	1250	1498
75°	814	1303	1637
80°	693	1381	1673
85°	494	1368	1601



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	88.7	3.1
10°-20°	253.5	8.9
20°-30°	383.0	13.5
30°-40°	461.5	16.2
40°-50°	484.5	17.1
50°-60°	453.3	16.0
60°-70°	374.4	13.2
70°-80°	255.1	9.0
80°-90°	87.0	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°	725.2	25.5
0°-40°	1186.7	41.8
0°-60°	2124.5	74.8
0°-90°	2841.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2841.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	937	937	937	937	937	
5°	935	934	929	935	935	89
15°	894	894	896	905	907	252
25°	815	819	828	845	849	375
35°	709	716	735	760	767	443
45°	584	596	626	660	672	450
55°	448	466	507	549	565	400
65°	303	328	381	429	446	300
75°	156	192	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°	936.9	936.9	936.9	936.9	936.9
2.5°	937.9	936.9	932.2	936.9	936.0
5°	935.1	934.1	929.4	935.1	935.1
7.5°	928.5	928.5	923.7	930.3	931.3
10°	919.0	919.0	916.2	923.7	923.7
12.5°	907.7	907.7	907.7	915.3	916.2
15°	893.6	894.5	895.5	904.9	906.8
17.5°	876.6	878.5	881.3	892.6	894.5
20°	858.7	860.6	865.3	878.5	881.3
22.5°	836.1	840.8	847.4	862.5	865.3
25°	815.3	819.1	828.5	844.6	849.3
27.5°	789.9	795.5	807.8	824.8	831.4
30°	764.4	770.1	785.2	805.0	810.6
32.5°	737.1	745.6	761.6	782.4	789.0
35°	708.8	716.4	735.2	759.7	767.3
37.5°	677.7	688.1	708.8	735.2	744.6
40°	647.6	658.9	682.4	710.7	722.0
42.5°	617.4	628.7	655.1	687.2	698.5
45°	583.5	595.7	625.9	659.8	672.1
47.5°	549.5	564.6	597.6	633.4	646.6
50°	514.7	531.6	567.4	605.1	620.2
52.5°	483.6	499.6	537.3	577.8	591.9
55°	447.7	465.6	507.1	548.6	564.6
57.5°	411.0	430.8	475.1	520.3	536.3
60°	375.2	396.8	445.8	491.1	509.0
62.5°	340.3	362.0	412.9	460.0	477.9
65°	302.6	328.0	380.8	428.9	445.8
67.5°	266.8	294.1	349.7	396.8	413.8
70°	231.9	258.3	317.7	363.8	380.8
72.5°	194.2	224.3	283.7	331.8	349.7
75°	156.5	192.3	250.7	297.9	314.8
77.5°	121.6	158.4	216.8	255.4	263.9
80°	89.5	127.3	178.2	205.5	215.9
82.5°	57.5	95.2	135.7	155.5	164.0
85°	32.0	63.2	88.6	99.9	103.7
87.5°	13.2	27.3	35.8	40.5	40.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)