

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: P310329

Luminaire Tested: **24FCZ2-60HE-UNV-L82765-RDP-CP125-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: P310329
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-60HE-UNV-L82765-RDP-CP125-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" POLYCARB SHEET
Light Source: (336) 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: 3422.0 lumens
Efficiency: N/A
Efficacy: 72.3 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

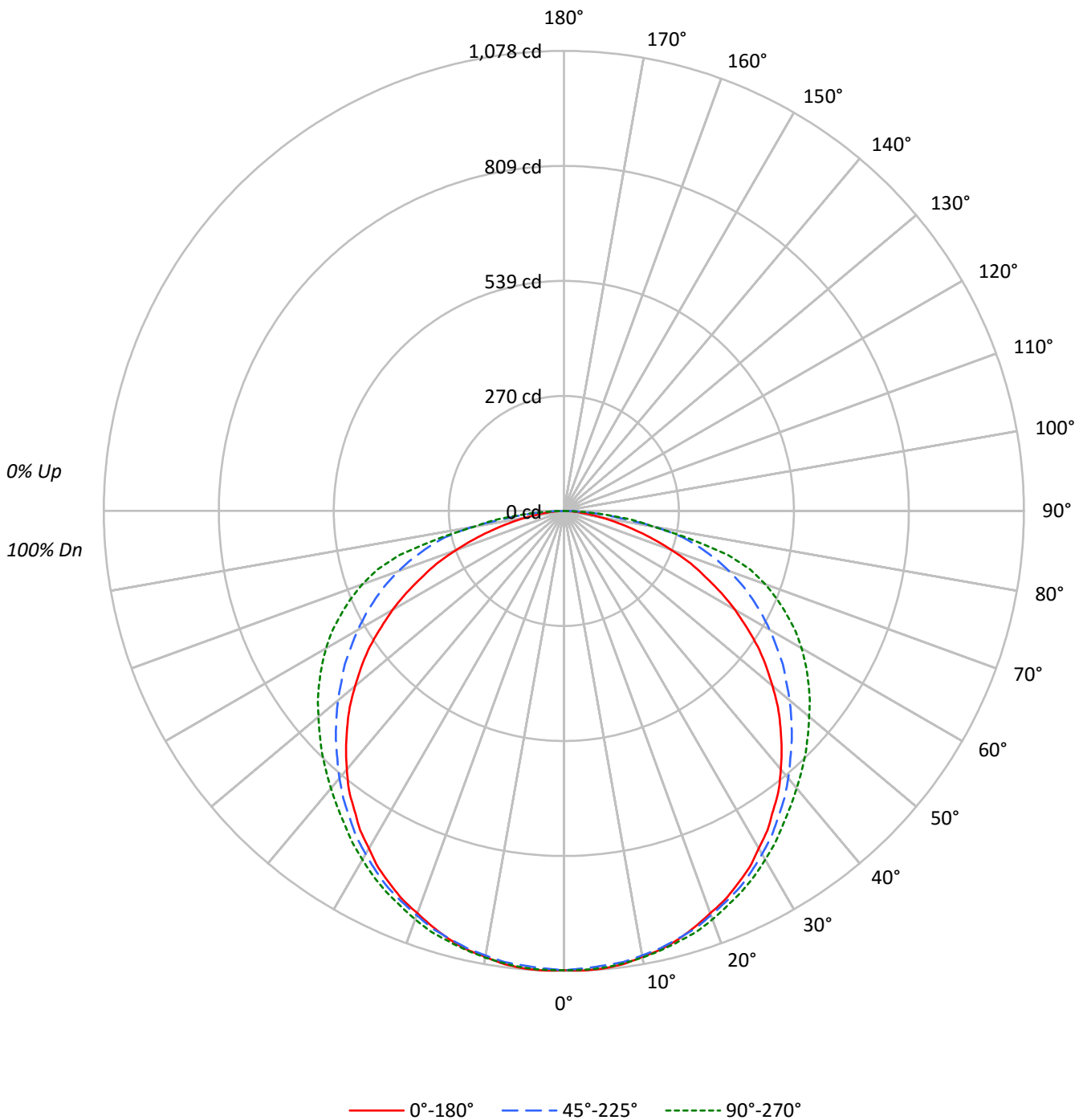
Input Watts (W): 47.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P310329

CATALOG NUMBER: 24FCZ2-60HE-UNV-L82765-RDP-CP125-W2A-U-3000K

Luminous Intensity Polar Plot





TEST NUMBER: P310329

CATALOG NUMBER: 24FCZ2-60HE-UNV-L82765-RDP-CP125-W2A-U-3000K

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	93	89	92	89	87	88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67
3	88	77	68	62	86	76	67	61	72	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1448	1448	1448
5°	1453	1444	1451
10°	1449	1445	1452
15°	1447	1445	1454
20°	1436	1444	1458
25°	1431	1446	1462
30°	1419	1443	1466
35°	1405	1439	1472
40°	1389	1437	1491
45°	1366	1437	1525
50°	1336	1446	1570
55°	1302	1469	1640
60°	1247	1498	1731
65°	1167	1551	1837
70°	1062	1623	1976
75°	900	1712	2065
80°	711	1723	1671
85°	523	1311	1468



TEST NUMBER: P310329

CATALOG NUMBER: 24FCZ2-60HE-UNV-L82765-RDP-CP125-W2A-U-3000K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	102.1	3.0
10°-20°	293.8	8.6
20°-30°	449.3	13.1
30°-40°	549.2	16.0
40°-50°	585.4	17.1
50°-60°	559.7	16.4
60°-70°	474.1	13.9
70°-80°	318.7	9.3
80°-90°	89.9	2.6
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°	845.1	24.7
0°-40°	1394.3	40.7
0°-60°	2539.4	74.2
0°-90°	3422.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3422.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1076	1076	1076	1076	1076	
5°	1076	1074	1069	1074	1074	102
15°	1039	1039	1037	1046	1044	293
25°	964	968	974	983	984	444
35°	856	862	876	893	896	536
45°	718	730	755	788	801	554
55°	555	575	626	676	699	494
65°	367	404	487	552	577	364
75°	173	236	329	385	397	185
85°	34	70	85	92	95	42
90°	0	0	0	0	0	



TEST NUMBER: P310329

CATALOG NUMBER: 24FCZ2-60HE-UNV-L82765-RDP-CP125-W2A-U-3000K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1076.1	1076.1	1076.1	1076.1	1076.1
2.5°	1077.8	1077.8	1072.7	1076.1	1076.1
5°	1076.1	1074.4	1069.3	1074.4	1074.4
7.5°	1071.0	1069.3	1065.9	1071.0	1069.3
10°	1060.8	1060.8	1057.5	1062.5	1062.5
12.5°	1052.4	1050.7	1049.0	1055.8	1054.1
15°	1038.8	1038.8	1037.1	1045.6	1043.9
17.5°	1021.8	1023.5	1025.2	1032.0	1033.7
20°	1003.1	1006.5	1008.2	1018.4	1018.4
22.5°	986.2	987.9	991.3	1001.4	1001.4
25°	964.1	967.5	974.3	982.8	984.5
27.5°	942.0	943.7	952.2	964.1	965.8
30°	913.2	918.3	928.5	942.0	943.7
32.5°	887.7	892.8	904.7	918.3	921.7
35°	855.5	862.3	875.8	892.8	896.2
37.5°	826.6	831.7	848.7	867.3	872.4
40°	791.0	801.2	818.1	840.2	848.7
42.5°	755.3	765.5	785.9	814.7	824.9
45°	718.0	729.9	755.3	787.6	801.2
47.5°	680.6	694.2	723.1	760.4	775.7
50°	638.2	655.2	690.8	733.3	750.2
52.5°	597.5	617.8	656.9	704.4	726.5
55°	555.0	575.4	626.3	675.5	699.3
57.5°	507.5	534.7	590.7	646.7	672.2
60°	463.4	488.8	556.7	617.8	643.3
62.5°	415.9	449.8	522.8	587.3	612.7
65°	366.6	404.0	487.1	551.6	577.1
67.5°	322.5	363.2	451.5	516.0	541.5
70°	269.9	320.8	412.5	477.0	502.4
72.5°	220.7	276.7	371.7	434.5	458.3
75°	173.1	235.9	329.3	385.3	397.2
77.5°	129.0	195.2	285.2	308.9	300.4
80°	91.7	156.2	222.4	210.5	215.6
82.5°	59.4	118.8	137.5	156.2	161.2
85°	33.9	69.6	84.9	91.7	95.1
87.5°	15.3	25.5	33.9	33.9	32.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)