

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: P310352

Luminaire Tested: **24FCZ2-60HE-UNV-L82765-RDP-CP250-W2A-U-5500K**

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: P310352
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-CP250-W2A-U-5500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.250" POLYCARB SHEET
Light Source: (336) 5500K 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: 3579.0 lumens
Efficiency: N/A
Efficacy: 73.2 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

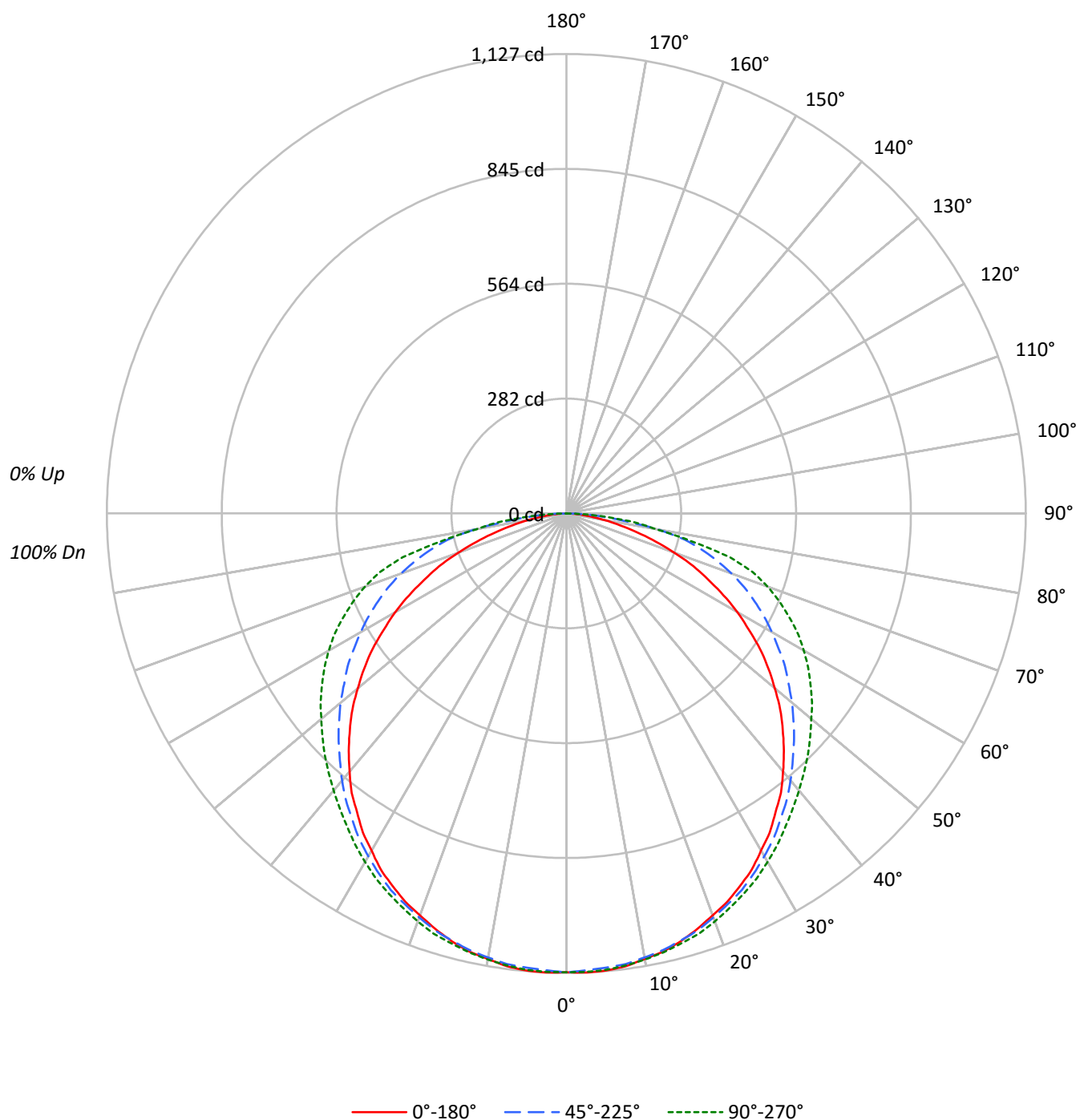
Input Watts (W): 48.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1514	1514	1514
5°	1520	1511	1518
10°	1516	1511	1518
15°	1513	1511	1521
20°	1502	1510	1525
25°	1497	1513	1529
30°	1484	1509	1533
35°	1470	1505	1540
40°	1453	1503	1559
45°	1429	1503	1594
50°	1397	1512	1642
55°	1362	1537	1716
60°	1304	1567	1810
65°	1221	1622	1922
70°	1111	1697	2067
75°	941	1790	2159
80°	743	1802	1747
85°	548	1371	1535



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	106.8	3.0
10°-20°	307.3	8.6
20°-30°	469.9	13.1
30°-40°	574.4	16.0
40°-50°	612.2	17.1
50°-60°	585.4	16.4
60°-70°	495.9	13.9
70°-80°	333.3	9.3
80°-90°	94.0	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°	883.9	24.7
0°-40°	1458.3	40.7
0°-60°	2655.9	74.2
0°-90°	3579.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3579.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1126	1126	1126	1126	1126	
5°	1126	1124	1118	1124	1124	107
15°	1086	1086	1085	1094	1092	306
25°	1008	1012	1019	1028	1030	465
35°	895	902	916	934	937	560
45°	751	763	790	824	838	579
55°	580	602	655	706	731	517
65°	383	422	510	577	604	381
75°	181	247	344	403	415	194
85°	36	73	89	96	99	44
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1125.5	1125.5	1125.5	1125.5	1125.5
2.5°	1127.3	1127.3	1121.9	1125.5	1125.5
5°	1125.5	1123.7	1118.4	1123.7	1123.7
7.5°	1120.2	1118.4	1114.8	1120.2	1118.4
10°	1109.5	1109.5	1106.0	1111.3	1111.3
12.5°	1100.6	1098.9	1097.1	1104.2	1102.4
15°	1086.4	1086.4	1084.7	1093.5	1091.8
17.5°	1068.7	1070.5	1072.2	1079.3	1081.1
20°	1049.2	1052.7	1054.5	1065.1	1065.1
22.5°	1031.4	1033.2	1036.7	1047.4	1047.4
25°	1008.3	1011.9	1019.0	1027.9	1029.6
27.5°	985.3	987.0	995.9	1008.3	1010.1
30°	955.1	960.4	971.0	985.3	987.0
32.5°	928.4	933.8	946.2	960.4	963.9
35°	894.7	901.8	916.0	933.8	937.3
37.5°	864.5	869.9	887.6	907.1	912.5
40°	827.3	837.9	855.7	878.7	887.6
42.5°	790.0	800.6	821.9	852.1	862.8
45°	750.9	763.3	790.0	823.7	837.9
47.5°	711.9	726.1	756.2	795.3	811.3
50°	667.5	685.2	722.5	766.9	784.6
52.5°	624.9	646.2	687.0	736.7	759.8
55°	580.5	601.8	655.1	706.5	731.4
57.5°	530.8	559.2	617.8	676.4	703.0
60°	484.6	511.3	582.3	646.2	672.8
62.5°	434.9	470.4	546.8	614.2	640.9
65°	383.4	422.5	509.5	576.9	603.6
67.5°	337.3	379.9	472.2	539.7	566.3
70°	282.3	335.5	431.4	498.8	525.5
72.5°	230.8	289.4	388.8	454.5	479.3
75°	181.1	246.8	344.4	403.0	415.4
77.5°	134.9	204.2	298.2	323.1	314.2
80°	95.9	163.3	232.6	220.1	225.5
82.5°	62.1	124.3	143.8	163.3	168.6
85°	35.5	72.8	88.8	95.9	99.4
87.5°	16.0	26.6	35.5	35.5	33.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)