

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: P311008

Luminaire Tested: **24FCZ2-60HE-UNV-L82765-CP125-W2A-U-5000K**

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: P311008
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: 24FCZ2-60HE-UNV-L82765-CP125-W2A-U-5000K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" POLYCARB SHEET
Light Source: (336) 5000K 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: 5548.0 lumens
Efficiency: N/A
Efficacy: 113.9 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

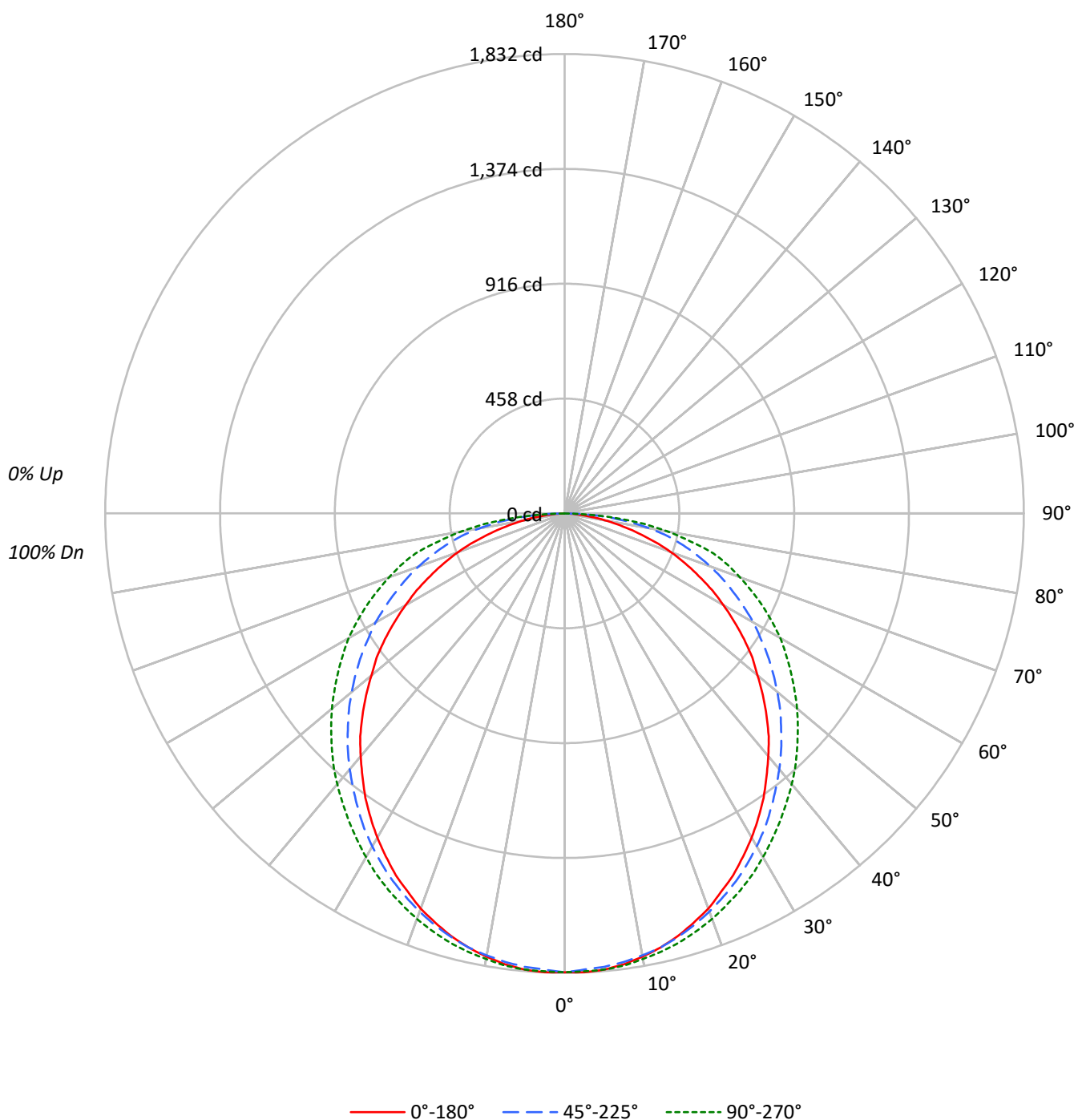
Input Watts (W): 48.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	50	30	10	50	30	10
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°	2462	2462	2462
5°	2466	2451	2466
10°	2452	2444	2465
15°	2431	2436	2467
20°	2401	2420	2464
25°	2364	2402	2462
30°	2319	2382	2459
35°	2274	2358	2461
40°	2221	2341	2477
45°	2168	2326	2497
50°	2104	2319	2535
55°	2051	2323	2586
60°	1971	2343	2675
65°	1881	2368	2772
70°	1781	2440	2926
75°	1589	2545	3196
80°	1355	2696	3266
85°	966	2671	3126



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	173.2	3.1
10°-20°	495.1	8.9
20°-30°	747.8	13.5
30°-40°	901.3	16.2
40°-50°	946.2	17.1
50°-60°	885.2	16.0
60°-70°	731.0	13.2
70°-80°	498.2	9.0
80°-90°	169.9	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°	1416.1	25.5
0°-40°	2317.4	41.8
0°-60°	4148.9	74.8
0°-90°	5548.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5548.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1830	1830	1830	1830	1830	
5°	1826	1824	1815	1826	1826	173
15°	1745	1747	1749	1767	1771	492
25°	1592	1600	1618	1649	1658	733
35°	1384	1399	1436	1484	1498	865
45°	1139	1163	1222	1288	1312	879
55°	874	909	990	1071	1103	780
65°	591	641	744	838	871	586
75°	306	376	490	582	615	326
85°	63	123	173	195	202	78
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1829.7	1829.7	1829.7	1829.7	1829.7
2.5°	1831.5	1829.7	1820.5	1829.7	1827.8
5°	1826.0	1824.2	1815.0	1826.0	1826.0
7.5°	1813.1	1813.1	1803.9	1816.8	1818.6
10°	1794.7	1794.7	1789.2	1803.9	1803.9
12.5°	1772.6	1772.6	1772.6	1787.3	1789.2
15°	1745.0	1746.8	1748.7	1767.1	1770.8
17.5°	1711.9	1715.6	1721.1	1743.2	1746.8
20°	1676.9	1680.6	1689.8	1715.6	1721.1
22.5°	1632.7	1641.9	1654.8	1684.3	1689.8
25°	1592.2	1599.6	1618.0	1649.3	1658.5
27.5°	1542.5	1553.6	1577.5	1610.6	1623.5
30°	1492.8	1503.9	1533.3	1572.0	1583.0
32.5°	1439.4	1456.0	1487.3	1527.8	1540.7
35°	1384.2	1399.0	1435.8	1483.6	1498.4
37.5°	1323.5	1343.7	1384.2	1435.8	1454.2
40°	1264.6	1286.7	1332.7	1387.9	1410.0
42.5°	1205.7	1227.8	1279.3	1341.9	1364.0
45°	1139.4	1163.3	1222.2	1288.5	1312.4
47.5°	1073.1	1102.6	1167.0	1237.0	1262.7
50°	1005.0	1038.2	1108.1	1181.7	1211.2
52.5°	944.3	975.6	1049.2	1128.4	1156.0
55°	874.3	909.3	990.3	1071.3	1102.6
57.5°	802.6	841.2	927.7	1016.1	1047.4
60°	732.6	774.9	870.7	959.0	994.0
62.5°	664.5	706.8	806.2	898.3	933.2
65°	590.9	640.6	743.7	837.5	870.7
67.5°	520.9	574.3	682.9	774.9	808.1
70°	452.8	504.4	620.3	710.5	743.7
72.5°	379.2	438.1	554.1	647.9	682.9
75°	305.6	375.5	489.6	581.7	614.8
77.5°	237.5	309.2	423.4	498.8	515.4
80°	174.9	248.5	347.9	401.3	421.5
82.5°	112.3	185.9	265.1	303.7	320.3
85°	62.6	123.3	173.0	195.1	202.5
87.5°	25.8	53.4	69.9	79.2	79.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)