

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: P311000

Luminaire Tested: **24FCZ2-60HE-UNV-L82765-CA125-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: P311000
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-CA125-W2A-U-5500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" ACRYLIC 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: 5714.0 lumens
Efficiency: N/A
Efficacy: 116.9 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

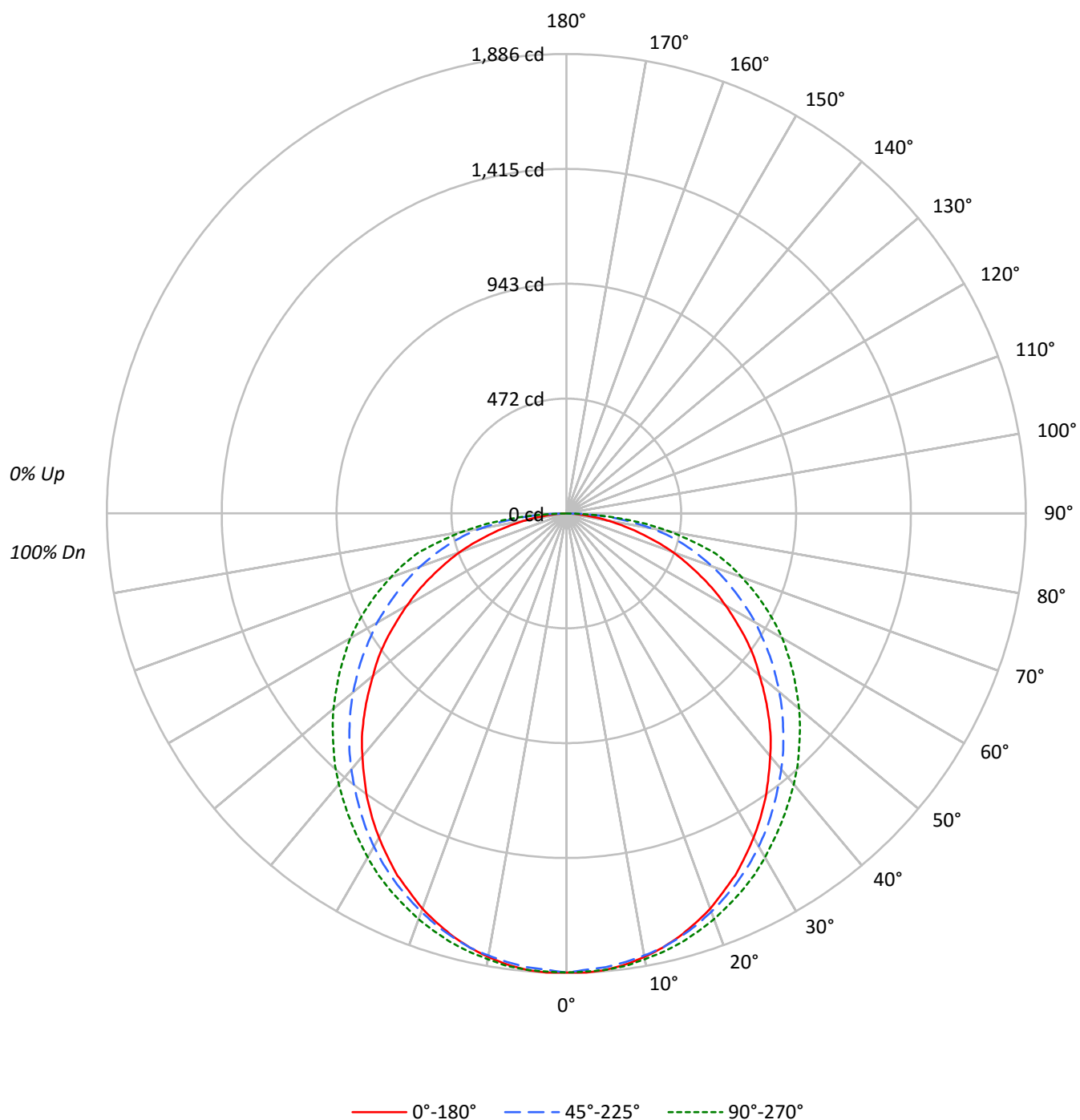
Input Watts (W): 48.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	2535	2535	2535
5°	2540	2525	2540
10°	2525	2518	2538
15°	2503	2509	2540
20°	2473	2492	2538
25°	2435	2474	2536
30°	2389	2454	2533
35°	2342	2429	2535
40°	2288	2411	2551
45°	2233	2395	2572
50°	2167	2389	2611
55°	2112	2392	2664
60°	2030	2413	2755
65°	1938	2438	2855
70°	1835	2513	3013
75°	1636	2622	3292
80°	1395	2776	3364
85°	996	2751	3219



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	178.3	3.1
10°-20°	509.9	8.9
20°-30°	770.2	13.5
30°-40°	928.3	16.2
40°-50°	974.5	17.1
50°-60°	911.7	16.0
60°-70°	752.9	13.2
70°-80°	513.1	9.0
80°-90°	175.0	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°	1458.5	25.5
0°-40°	2386.8	41.8
0°-60°	4273.0	74.8
0°-90°	5714.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5714.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1884	1884	1884	1884	1884	
5°	1881	1879	1869	1881	1881	178
15°	1797	1799	1801	1820	1824	507
25°	1640	1648	1666	1699	1708	755
35°	1426	1441	1479	1528	1543	891
45°	1174	1198	1259	1327	1352	905
55°	900	936	1020	1103	1136	804
65°	609	660	766	863	897	604
75°	315	387	504	599	633	336
85°	64	127	178	201	208	81
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1884.4	1884.4	1884.4	1884.4	1884.4
2.5°	1886.3	1884.4	1874.9	1884.4	1882.5
5°	1880.6	1878.7	1869.3	1880.6	1880.6
7.5°	1867.4	1867.4	1857.9	1871.2	1873.1
10°	1848.4	1848.4	1842.7	1857.9	1857.9
12.5°	1825.7	1825.7	1825.7	1840.8	1842.7
15°	1797.2	1799.1	1801.0	1820.0	1823.8
17.5°	1763.1	1766.9	1772.6	1795.3	1799.1
20°	1727.1	1730.9	1740.3	1766.9	1772.6
22.5°	1681.6	1691.1	1704.3	1734.7	1740.3
25°	1639.9	1647.5	1666.4	1698.6	1708.1
27.5°	1588.7	1600.1	1624.7	1658.8	1672.1
30°	1537.5	1548.9	1579.2	1619.0	1630.4
32.5°	1482.5	1499.6	1531.8	1573.5	1586.8
35°	1425.6	1440.8	1478.7	1528.0	1543.2
37.5°	1363.1	1383.9	1425.6	1478.7	1497.7
40°	1302.4	1325.2	1372.6	1429.4	1452.2
42.5°	1241.8	1264.5	1317.6	1382.0	1404.8
45°	1173.5	1198.1	1258.8	1327.1	1351.7
47.5°	1105.3	1135.6	1201.9	1274.0	1300.5
50°	1035.1	1069.2	1141.3	1217.1	1247.4
52.5°	972.5	1004.8	1080.6	1162.1	1190.6
55°	900.5	936.5	1019.9	1103.4	1135.6
57.5°	826.6	866.4	955.5	1046.5	1078.7
60°	754.5	798.1	896.7	987.7	1023.7
62.5°	684.4	728.0	830.4	925.2	961.2
65°	608.6	659.7	765.9	862.6	896.7
67.5°	536.5	591.5	703.3	798.1	832.3
70°	466.4	519.4	638.9	731.8	765.9
72.5°	390.5	451.2	570.6	667.3	703.3
75°	314.7	386.7	504.3	599.1	633.2
77.5°	244.6	318.5	436.0	513.8	530.8
80°	180.1	255.9	358.3	413.3	434.1
82.5°	115.6	191.5	273.0	312.8	329.9
85°	64.5	127.0	178.2	201.0	208.5
87.5°	26.5	55.0	72.0	81.5	81.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)