

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: P311048

Luminaire Tested: **24FCZ2-65HE-UNV-L82765-CP125-W2A-U-2700K**

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: P311048
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: 24FCZ2-65HE-UNV-L82765-CP125-W2A-U-2700K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" POLYCARB SHEET
Light Source: (336) 2700K 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: 5357.0 lumens
Efficiency: N/A
Efficacy: 101.8 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

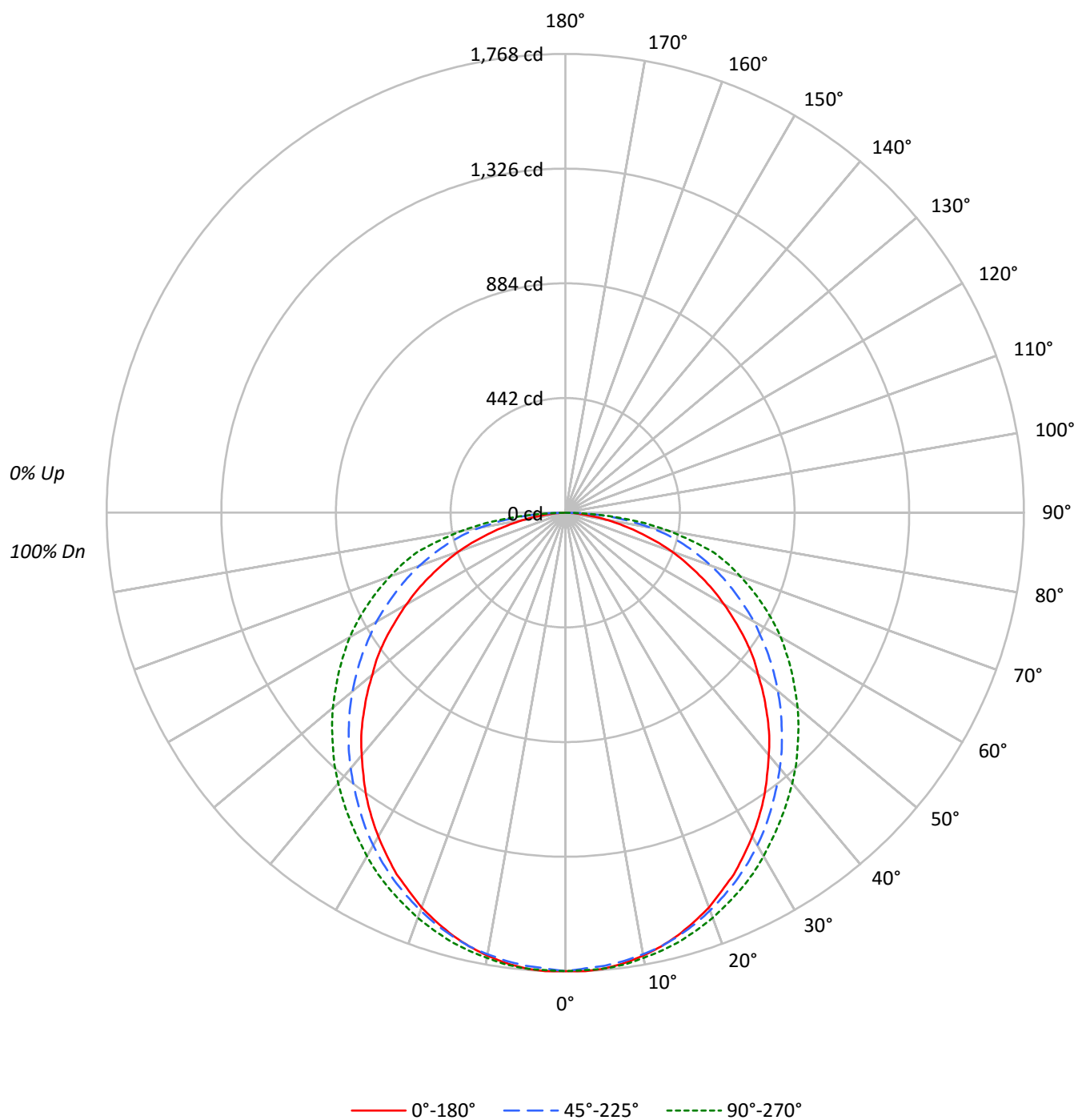
Input Watts (W): 52.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2377	2377	2377
5°	2381	2367	2381
10°	2368	2360	2380
15°	2347	2352	2382
20°	2318	2336	2379
25°	2282	2319	2377
30°	2239	2300	2375
35°	2195	2277	2376
40°	2145	2260	2391
45°	2093	2246	2411
50°	2031	2240	2448
55°	1980	2243	2497
60°	1904	2262	2583
65°	1816	2286	2677
70°	1720	2356	2825
75°	1534	2458	3086
80°	1308	2603	3154
85°	932	2580	3018



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	167.2	3.1
10°-20°	478.1	8.9
20°-30°	722.1	13.5
30°-40°	870.3	16.2
40°-50°	913.6	17.1
50°-60°	854.8	16.0
60°-70°	705.9	13.2
70°-80°	481.0	9.0
80°-90°	164.0	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°	1367.4	25.5
0°-40°	2237.6	41.8
0°-60°	4006.1	74.8
0°-90°	5357.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5357.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1767	1767	1767	1767	1767	
5°	1763	1761	1752	1763	1763	167
15°	1685	1687	1688	1706	1710	475
25°	1537	1544	1562	1592	1601	707
35°	1337	1351	1386	1432	1447	835
45°	1100	1123	1180	1244	1267	849
55°	844	878	956	1034	1065	754
65°	570	618	718	809	841	566
75°	295	363	473	562	594	315
85°	60	119	167	188	196	76
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1766.7	1766.7	1766.7	1766.7	1766.7
2.5°	1768.5	1766.7	1757.8	1766.7	1764.9
5°	1763.1	1761.4	1752.5	1763.1	1763.1
7.5°	1750.7	1750.7	1741.8	1754.3	1756.0
10°	1732.9	1732.9	1727.6	1741.8	1741.8
12.5°	1711.6	1711.6	1711.6	1725.8	1727.6
15°	1684.9	1686.7	1688.5	1706.3	1709.8
17.5°	1652.9	1656.5	1661.8	1683.2	1686.7
20°	1619.2	1622.7	1631.6	1656.5	1661.8
22.5°	1576.5	1585.4	1597.8	1626.3	1631.6
25°	1537.4	1544.5	1562.3	1592.5	1601.4
27.5°	1489.4	1500.1	1523.2	1555.2	1567.6
30°	1441.4	1452.1	1480.5	1517.9	1528.5
32.5°	1389.9	1405.9	1436.1	1475.2	1487.6
35°	1336.6	1350.8	1386.3	1432.5	1446.8
37.5°	1277.9	1297.5	1336.6	1386.3	1404.1
40°	1221.0	1242.4	1286.8	1340.1	1361.5
42.5°	1164.2	1185.5	1235.3	1295.7	1317.0
45°	1100.2	1123.3	1180.2	1244.1	1267.3
47.5°	1036.2	1064.6	1126.8	1194.4	1219.3
50°	970.4	1002.4	1070.0	1141.1	1169.5
52.5°	911.8	942.0	1013.1	1089.5	1116.2
55°	844.2	878.0	956.2	1034.4	1064.6
57.5°	774.9	812.3	895.8	981.1	1011.3
60°	707.4	748.3	840.7	926.0	959.8
62.5°	641.6	682.5	778.5	867.3	901.1
65°	570.5	618.5	718.1	808.7	840.7
67.5°	503.0	554.5	659.4	748.3	780.3
70°	437.2	487.0	599.0	686.1	718.1
72.5°	366.1	423.0	535.0	625.6	659.4
75°	295.0	362.6	472.8	561.6	593.6
77.5°	229.3	298.6	408.8	481.7	497.7
80°	168.8	239.9	335.9	387.5	407.0
82.5°	108.4	179.5	255.9	293.3	309.3
85°	60.4	119.1	167.1	188.4	195.5
87.5°	24.9	51.5	67.5	76.4	76.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)