

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: P310465

Luminaire Tested: **24FCZ2-75HE-UNV-L82765-RDP-CP125-W2A-U-3500K**

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: P310465
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: 24FCZ2-75HE-UNV-L82765-RDP-CP125-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" POLYCARB SHEET
Light Source: (336) 3500K 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: 4423.0 lumens
Efficiency: N/A
Efficacy: 70.1 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

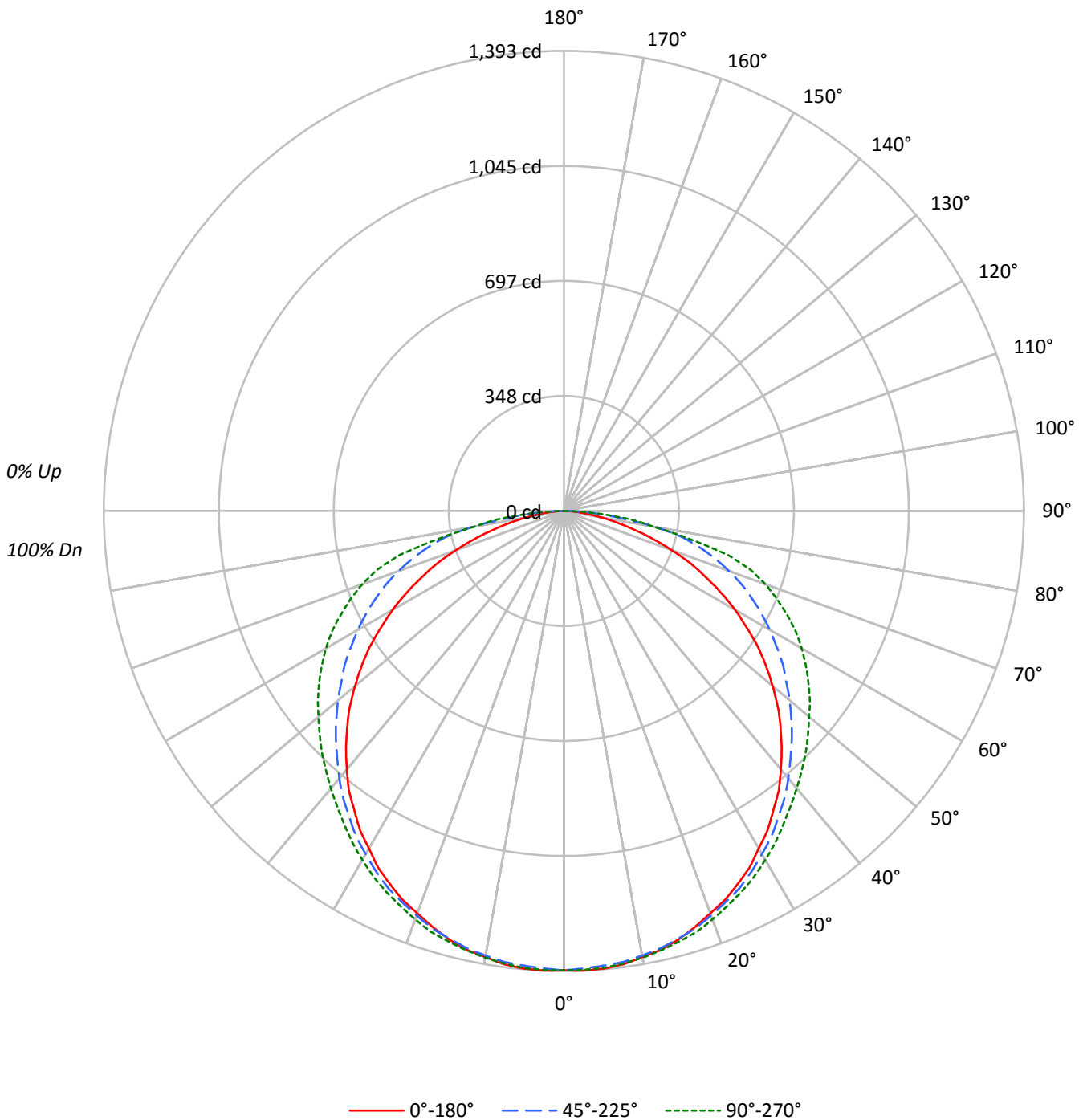
Input Watts (W): 63.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				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°	1871	1871	1871
5°	1879	1867	1876
10°	1873	1867	1876
15°	1870	1867	1879
20°	1857	1866	1885
25°	1850	1870	1889
30°	1834	1864	1895
35°	1816	1859	1903
40°	1796	1857	1927
45°	1766	1858	1970
50°	1727	1869	2030
55°	1683	1899	2120
60°	1612	1936	2238
65°	1509	2004	2375
70°	1372	2097	2555
75°	1163	2213	2669
80°	918	2227	2159
85°	678	1694	1897



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	131.9	3.0
10°-20°	379.7	8.6
20°-30°	580.7	13.1
30°-40°	709.9	16.0
40°-50°	756.6	17.1
50°-60°	723.4	16.4
60°-70°	612.8	13.9
70°-80°	411.8	9.3
80°-90°	116.2	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°	1092.3	24.7
0°-40°	1802.2	40.7
0°-60°	3282.2	74.2
0°-90°	4423.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4423.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1391	1391	1391	1391	1391	
5°	1391	1389	1382	1389	1389	132
15°	1343	1343	1340	1351	1349	379
25°	1246	1250	1259	1270	1272	574
35°	1106	1114	1132	1154	1158	693
45°	928	943	976	1018	1036	716
55°	717	744	810	873	904	639
65°	474	522	630	713	746	470
75°	224	305	426	498	513	240
85°	44	90	110	118	123	54
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1390.9	1390.9	1390.9	1390.9	1390.9
2.5°	1393.1	1393.1	1386.5	1390.9	1390.9
5°	1390.9	1388.7	1382.1	1388.7	1388.7
7.5°	1384.3	1382.1	1377.7	1384.3	1382.1
10°	1371.2	1371.2	1366.8	1373.4	1373.4
12.5°	1360.2	1358.0	1355.8	1364.6	1362.4
15°	1342.6	1342.6	1340.4	1351.4	1349.2
17.5°	1320.7	1322.9	1325.1	1333.9	1336.1
20°	1296.6	1301.0	1303.2	1316.3	1316.3
22.5°	1274.6	1276.8	1281.2	1294.4	1294.4
25°	1246.1	1250.5	1259.3	1270.2	1272.4
27.5°	1217.6	1219.8	1230.8	1246.1	1248.3
30°	1180.3	1186.9	1200.0	1217.6	1219.8
32.5°	1147.4	1154.0	1169.3	1186.9	1191.3
35°	1105.7	1114.5	1132.0	1154.0	1158.4
37.5°	1068.4	1075.0	1096.9	1121.1	1127.6
40°	1022.3	1035.5	1057.4	1086.0	1096.9
42.5°	976.3	989.4	1015.8	1053.1	1066.2
45°	928.0	943.4	976.3	1018.0	1035.5
47.5°	879.7	897.3	934.6	982.8	1002.6
50°	824.9	846.8	892.9	947.7	969.7
52.5°	772.2	798.6	849.0	910.5	939.0
55°	717.4	743.7	809.5	873.2	903.9
57.5°	656.0	691.1	763.5	835.9	868.8
60°	598.9	631.8	719.6	798.6	831.5
62.5°	537.5	581.4	675.7	759.1	792.0
65°	473.9	522.1	629.6	713.0	745.9
67.5°	416.8	469.5	583.6	666.9	699.8
70°	348.8	414.6	533.1	616.5	649.4
72.5°	285.2	357.6	480.5	561.6	592.3
75°	223.8	304.9	425.6	498.0	513.4
77.5°	166.7	252.3	368.6	399.3	388.3
80°	118.5	201.8	287.4	272.0	278.6
82.5°	76.8	153.6	177.7	201.8	208.4
85°	43.9	89.9	109.7	118.5	122.9
87.5°	19.7	32.9	43.9	43.9	41.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)