

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: P310831

Luminaire Tested: **24FCZ2-45-UNV-L82765-CP125-W2A-U-6500K**

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: P310831
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: 24FCZ2-45-UNV-L82765-CP125-W2A-U-6500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" POLYCARB SHEET
Light Source: (168) 6500K 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: 4232.0 lumens
Efficiency: N/A
Efficacy: 107.7 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

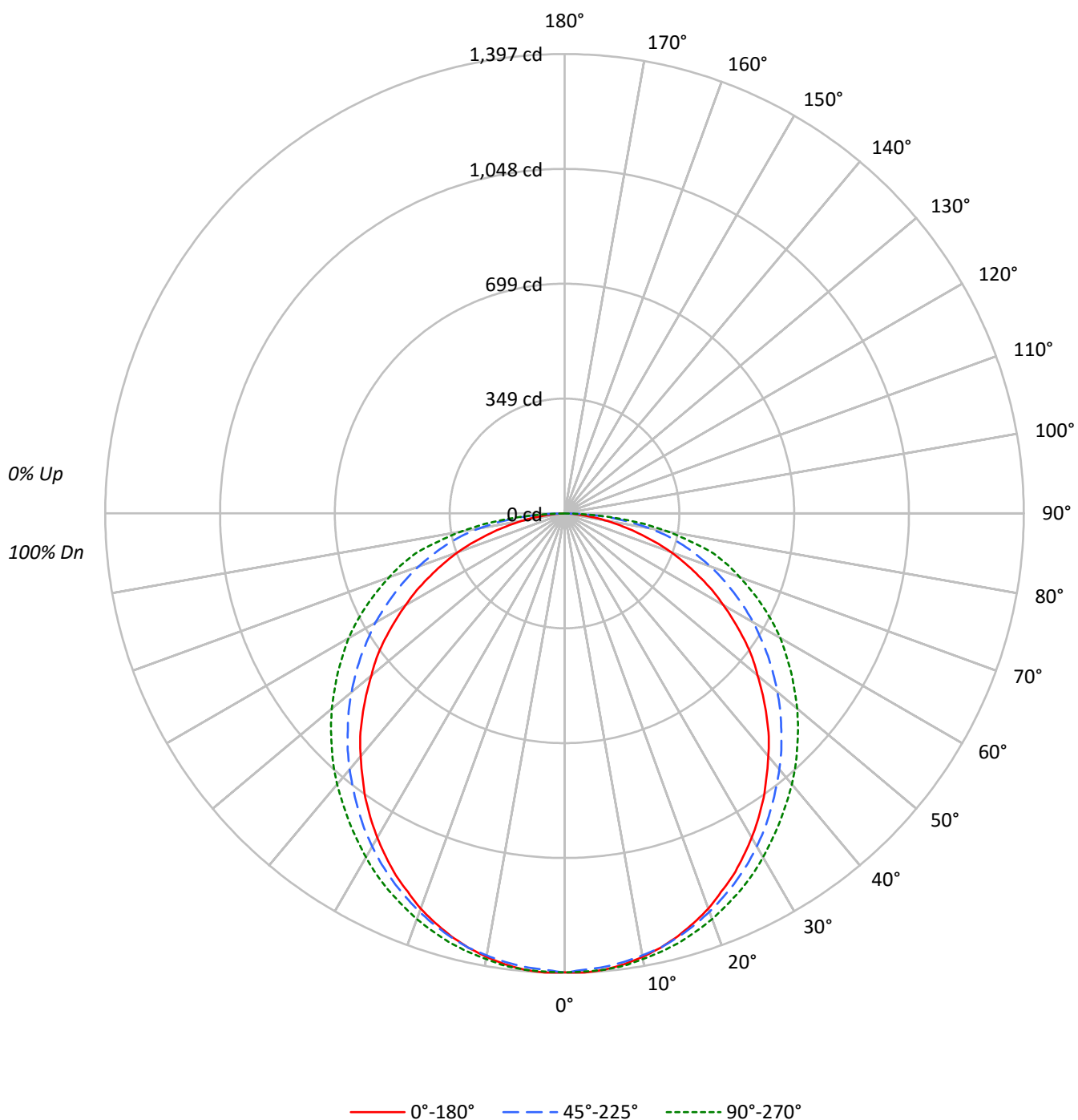
Input Watts (W): 39.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1878	1878	1878
5°	1881	1870	1881
10°	1870	1865	1880
15°	1854	1858	1881
20°	1831	1846	1880
25°	1803	1832	1878
30°	1769	1817	1876
35°	1734	1799	1877
40°	1694	1786	1889
45°	1654	1774	1905
50°	1605	1769	1934
55°	1564	1772	1973
60°	1504	1787	2040
65°	1435	1806	2114
70°	1359	1862	2232
75°	1212	1942	2438
80°	1034	2056	2491
85°	736	2038	2385



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	132.1	3.1
10°-20°	377.7	8.9
20°-30°	570.5	13.5
30°-40°	687.5	16.2
40°-50°	721.8	17.1
50°-60°	675.3	16.0
60°-70°	557.6	13.2
70°-80°	380.0	9.0
80°-90°	129.6	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°	1080.2	25.5
0°-40°	1767.7	41.8
0°-60°	3164.8	74.8
0°-90°	4232.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4232.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1396	1396	1396	1396	1396	
5°	1393	1392	1384	1393	1393	132
15°	1331	1332	1334	1348	1351	375
25°	1214	1220	1234	1258	1265	559
35°	1056	1067	1095	1132	1143	660
45°	869	887	932	983	1001	670
55°	667	694	755	817	841	595
65°	451	489	567	639	664	447
75°	233	286	374	444	469	249
85°	48	94	132	149	154	60
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1395.7	1395.7	1395.7	1395.7	1395.7
2.5°	1397.1	1395.7	1388.7	1395.7	1394.3
5°	1392.9	1391.5	1384.4	1392.9	1392.9
7.5°	1383.0	1383.0	1376.0	1385.8	1387.3
10°	1369.0	1369.0	1364.8	1376.0	1376.0
12.5°	1352.1	1352.1	1352.1	1363.4	1364.8
15°	1331.1	1332.5	1333.9	1347.9	1350.7
17.5°	1305.8	1308.6	1312.8	1329.7	1332.5
20°	1279.1	1281.9	1289.0	1308.6	1312.8
22.5°	1245.4	1252.5	1262.3	1284.8	1289.0
25°	1214.5	1220.2	1234.2	1258.1	1265.1
27.5°	1176.6	1185.1	1203.3	1228.6	1238.4
30°	1138.7	1147.2	1169.6	1199.1	1207.5
32.5°	1098.0	1110.6	1134.5	1165.4	1175.2
35°	1055.9	1067.1	1095.2	1131.7	1142.9
37.5°	1009.5	1025.0	1055.9	1095.2	1109.2
40°	964.6	981.5	1016.6	1058.7	1075.5
42.5°	919.7	936.5	975.9	1023.6	1040.4
45°	869.1	887.4	932.3	982.9	1001.1
47.5°	818.6	841.1	890.2	943.6	963.2
50°	766.6	791.9	845.3	901.4	923.9
52.5°	720.3	744.2	800.3	860.7	881.8
55°	666.9	693.6	755.4	817.2	841.1
57.5°	612.2	641.7	707.7	775.1	798.9
60°	558.8	591.1	664.1	731.5	758.2
62.5°	506.9	539.2	615.0	685.2	711.9
65°	450.7	488.6	567.3	638.9	664.1
67.5°	397.4	438.1	520.9	591.1	616.4
70°	345.4	384.7	473.2	542.0	567.3
72.5°	289.2	334.2	422.6	494.2	520.9
75°	233.1	286.4	373.5	443.7	469.0
77.5°	181.1	235.9	322.9	380.5	393.1
80°	133.4	189.6	265.4	306.1	321.5
82.5°	85.7	141.8	202.2	231.7	244.3
85°	47.7	94.1	132.0	148.8	154.5
87.5°	19.7	40.7	53.4	60.4	60.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)