

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: P310828

Luminaire Tested: **24FCZ2-45-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: P310828
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-5000K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" POLYCARB SHEET
Light Source: (168) 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: 4168.0 lumens
Efficiency: N/A
Efficacy: 108.3 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

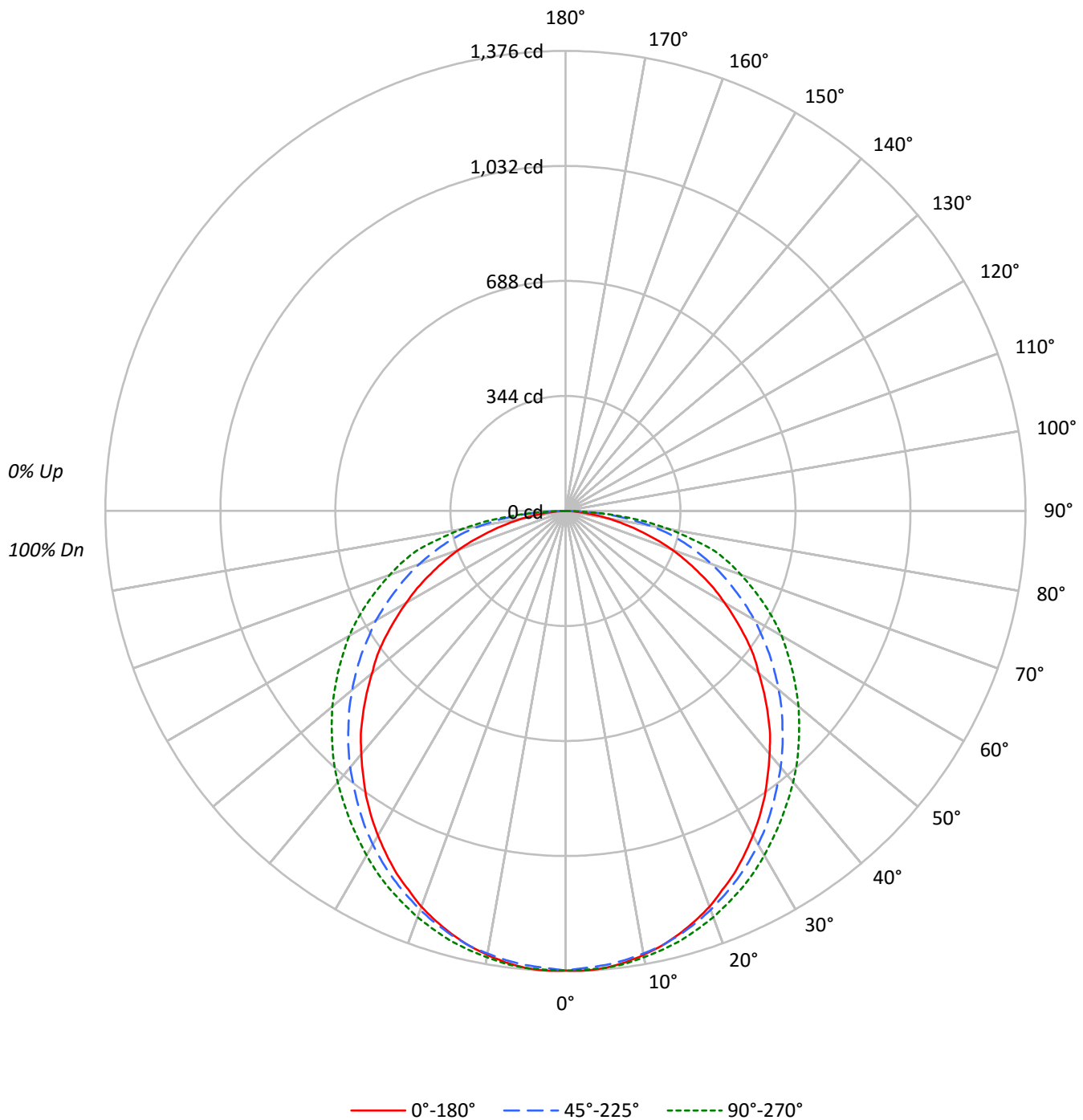
Input Watts (W): 38.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1850	1850	1850
5°	1853	1842	1853
10°	1842	1836	1852
15°	1826	1830	1853
20°	1804	1818	1851
25°	1776	1805	1850
30°	1742	1790	1848
35°	1708	1772	1849
40°	1669	1759	1861
45°	1629	1747	1876
50°	1580	1743	1905
55°	1541	1745	1943
60°	1481	1760	2009
65°	1413	1779	2082
70°	1338	1833	2198
75°	1194	1912	2401
80°	1018	2025	2454
85°	726	2007	2348



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	130.1	3.1
10°-20°	372.0	8.9
20°-30°	561.8	13.5
30°-40°	677.1	16.2
40°-50°	710.9	17.1
50°-60°	665.0	16.0
60°-70°	549.2	13.2
70°-80°	374.2	9.0
80°-90°	127.6	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°	1063.9	25.5
0°-40°	1741.0	41.8
0°-60°	3116.9	74.8
0°-90°	4168.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4168.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1375	1375	1375	1375	1375	
5°	1372	1370	1364	1372	1372	130
15°	1311	1312	1314	1328	1330	370
25°	1196	1202	1216	1239	1246	550
35°	1040	1051	1079	1115	1126	650
45°	856	874	918	968	986	660
55°	657	683	744	805	828	586
65°	444	481	559	629	654	440
75°	230	282	368	437	462	245
85°	47	93	130	147	152	59
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1374.6	1374.6	1374.6	1374.6	1374.6
2.5°	1376.0	1374.6	1367.7	1374.6	1373.2
5°	1371.8	1370.4	1363.5	1371.8	1371.8
7.5°	1362.1	1362.1	1355.2	1364.9	1366.3
10°	1348.3	1348.3	1344.1	1355.2	1355.2
12.5°	1331.7	1331.7	1331.7	1342.8	1344.1
15°	1311.0	1312.3	1313.7	1327.6	1330.3
17.5°	1286.1	1288.8	1293.0	1309.6	1312.3
20°	1259.8	1262.6	1269.5	1288.8	1293.0
22.5°	1226.6	1233.5	1243.2	1265.3	1269.5
25°	1196.2	1201.7	1215.5	1239.0	1246.0
27.5°	1158.8	1167.1	1185.1	1210.0	1219.7
30°	1121.5	1129.8	1151.9	1181.0	1189.3
32.5°	1081.4	1093.8	1117.4	1147.8	1157.5
35°	1039.9	1051.0	1078.6	1114.6	1125.7
37.5°	994.3	1009.5	1039.9	1078.6	1092.5
40°	950.0	966.6	1001.2	1042.7	1059.3
42.5°	905.8	922.4	961.1	1008.1	1024.7
45°	856.0	874.0	918.2	968.0	986.0
47.5°	806.2	828.3	876.7	929.3	948.6
50°	755.0	779.9	832.5	887.8	909.9
52.5°	709.4	732.9	788.2	847.7	868.4
55°	656.9	683.1	744.0	804.8	828.3
57.5°	602.9	632.0	697.0	763.3	786.9
60°	550.4	582.2	654.1	720.5	746.7
62.5°	499.2	531.0	605.7	674.8	701.1
65°	443.9	481.2	558.7	629.2	654.1
67.5°	391.4	431.5	513.0	582.2	607.1
70°	340.2	378.9	466.0	533.8	558.7
72.5°	284.9	329.1	416.2	486.8	513.0
75°	229.6	282.1	367.8	437.0	461.9
77.5°	178.4	232.3	318.1	374.8	387.2
80°	131.4	186.7	261.4	301.5	316.7
82.5°	84.4	139.7	199.1	228.2	240.6
85°	47.0	92.7	130.0	146.6	152.1
87.5°	19.4	40.1	52.5	59.5	59.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)