

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: P311416

Luminaire Tested: **24FCZ2-40-UNV-L82765-S-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: P311416  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: 24FCZ2-40-UNV-L82765-S-CP125-W2A-U-6500K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH 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**

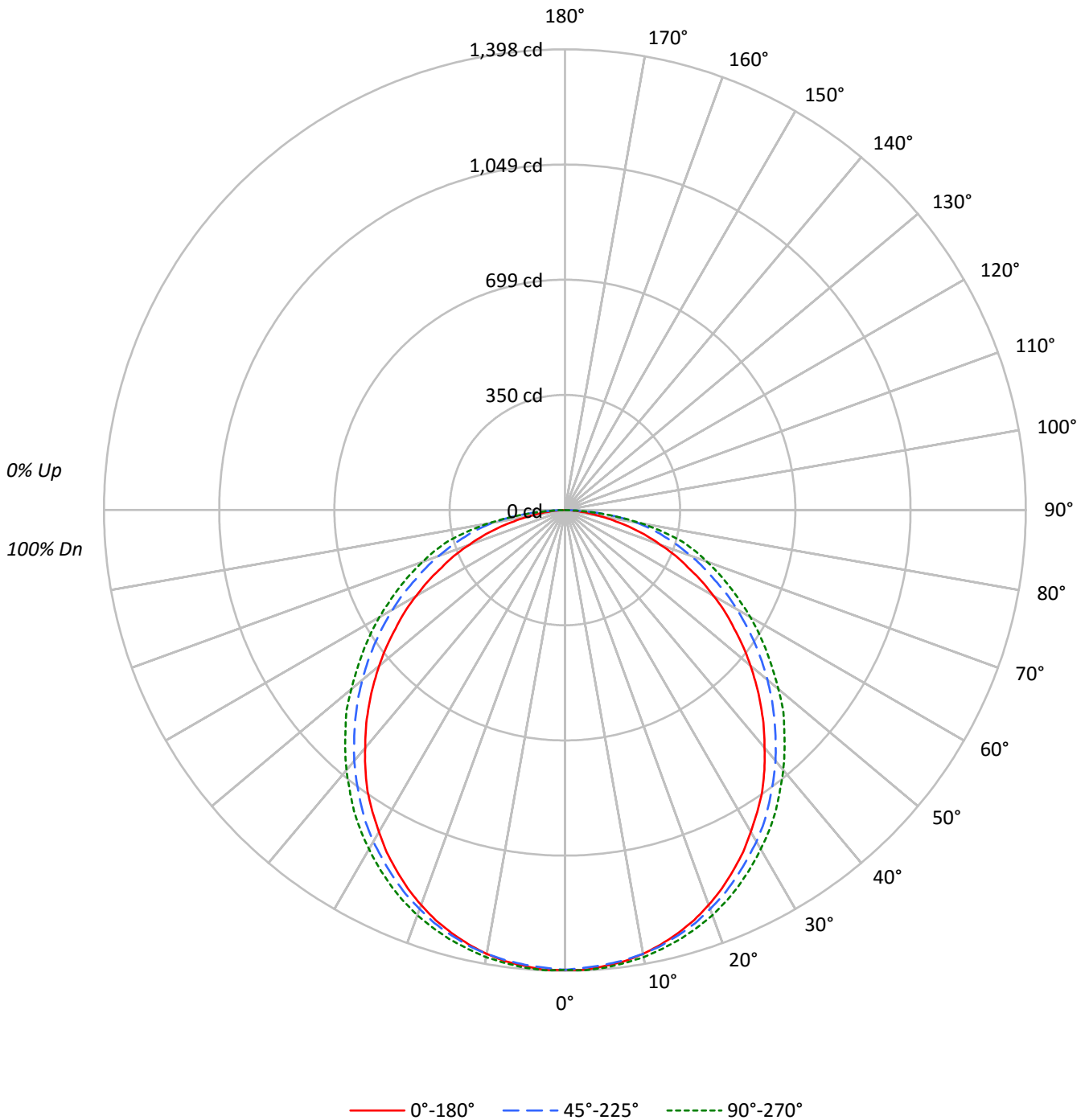
Lumens per Lamp: N/A  
Luminaire Lumens: 3971.0 lumens  
Efficiency: N/A  
Efficacy: 116.1 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.27 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 34.2  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	1877	1877	1877
5°	1876	1870	1883
10°	1868	1868	1882
15°	1850	1859	1878
20°	1826	1844	1873
25°	1792	1826	1861
30°	1752	1805	1846
35°	1713	1776	1831
40°	1655	1746	1810
45°	1601	1711	1791
50°	1539	1679	1769
55°	1471	1648	1752
60°	1402	1622	1748
65°	1313	1594	1759
70°	1216	1603	1806
75°	1089	1633	1908
80°	879	1730	1867
85°	662	1519	1480



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	132.1	3.3
10°-20°	377.4	9.5
20°-30°	567.3	14.3
30°-40°	675.7	17.0
40°-50°	691.6	17.4
50°-60°	622.6	15.7
60°-70°	488.9	12.3
70°-80°	317.3	8.0
80°-90°	98.1	2.5
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°	1076.7	27.1
0°-40°	1752.4	44.1
0°-60°	3066.6	77.2
0°-90°	3971.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3971.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1395	1395	1395	1395	1395	
5°	1389	1391	1385	1392	1394	132
15°	1328	1332	1334	1346	1348	375
25°	1207	1217	1230	1250	1254	556
35°	1043	1056	1081	1108	1115	651
45°	841	862	899	933	941	649
55°	627	655	703	739	747	562
65°	412	444	501	542	552	411
75°	209	250	314	357	367	222
85°	43	80	98	96	96	52
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1395.0	1395.0	1395.0	1395.0	1395.0
2.5°	1396.3	1396.3	1390.0	1396.3	1397.6
5°	1388.7	1391.3	1384.9	1392.5	1393.8
7.5°	1381.2	1381.2	1377.4	1384.9	1386.2
10°	1367.3	1368.6	1367.3	1376.1	1377.4
12.5°	1349.6	1352.2	1353.4	1362.2	1363.5
15°	1328.2	1332.0	1334.5	1345.8	1348.4
17.5°	1304.2	1308.0	1314.3	1326.9	1329.4
20°	1275.2	1280.3	1287.8	1304.2	1308.0
22.5°	1243.7	1248.7	1261.3	1276.5	1282.8
25°	1207.1	1217.2	1229.8	1250.0	1253.8
27.5°	1170.5	1179.3	1195.7	1217.2	1222.2
30°	1127.6	1141.5	1161.7	1183.1	1188.2
32.5°	1086.0	1099.9	1123.9	1146.6	1152.9
35°	1043.1	1055.7	1081.0	1107.5	1115.0
37.5°	993.9	1010.3	1038.1	1064.6	1072.1
40°	942.2	962.4	993.9	1021.7	1030.5
42.5°	893.0	914.5	946.0	976.3	986.4
45°	841.3	861.5	899.3	933.4	941.0
47.5°	788.3	811.0	851.4	885.5	898.1
50°	735.4	759.3	802.2	837.5	845.1
52.5°	682.4	707.6	753.0	790.9	794.6
55°	626.9	654.6	702.6	739.1	746.7
57.5°	576.4	600.4	652.1	690.0	698.8
60°	520.9	547.4	602.9	638.2	649.6
62.5°	468.0	495.7	553.7	589.0	599.1
65°	412.5	444.0	500.8	542.4	552.5
67.5°	364.5	394.8	455.3	495.7	505.8
70°	309.0	343.1	407.4	449.0	459.1
72.5°	261.1	296.4	360.7	401.1	416.2
75°	209.4	249.7	314.1	357.0	367.0
77.5°	158.9	205.6	271.2	304.0	304.0
80°	113.5	162.7	223.3	238.4	240.9
82.5°	74.4	122.3	165.2	164.0	164.0
85°	42.9	79.5	98.4	95.9	95.9
87.5°	16.4	32.8	35.3	35.3	34.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)