

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: P311363

Luminaire Tested: **24FCZ2-40HE-UNV-L82765-S-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: P311363
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: 24FCZ2-40HE-UNV-L82765-S-CP125-W2A-U-2700K
Description: 2'X4' TROFFER LED MODULE, SMOOTH 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: 3508.0 lumens
Efficiency: N/A
Efficacy: 115.4 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

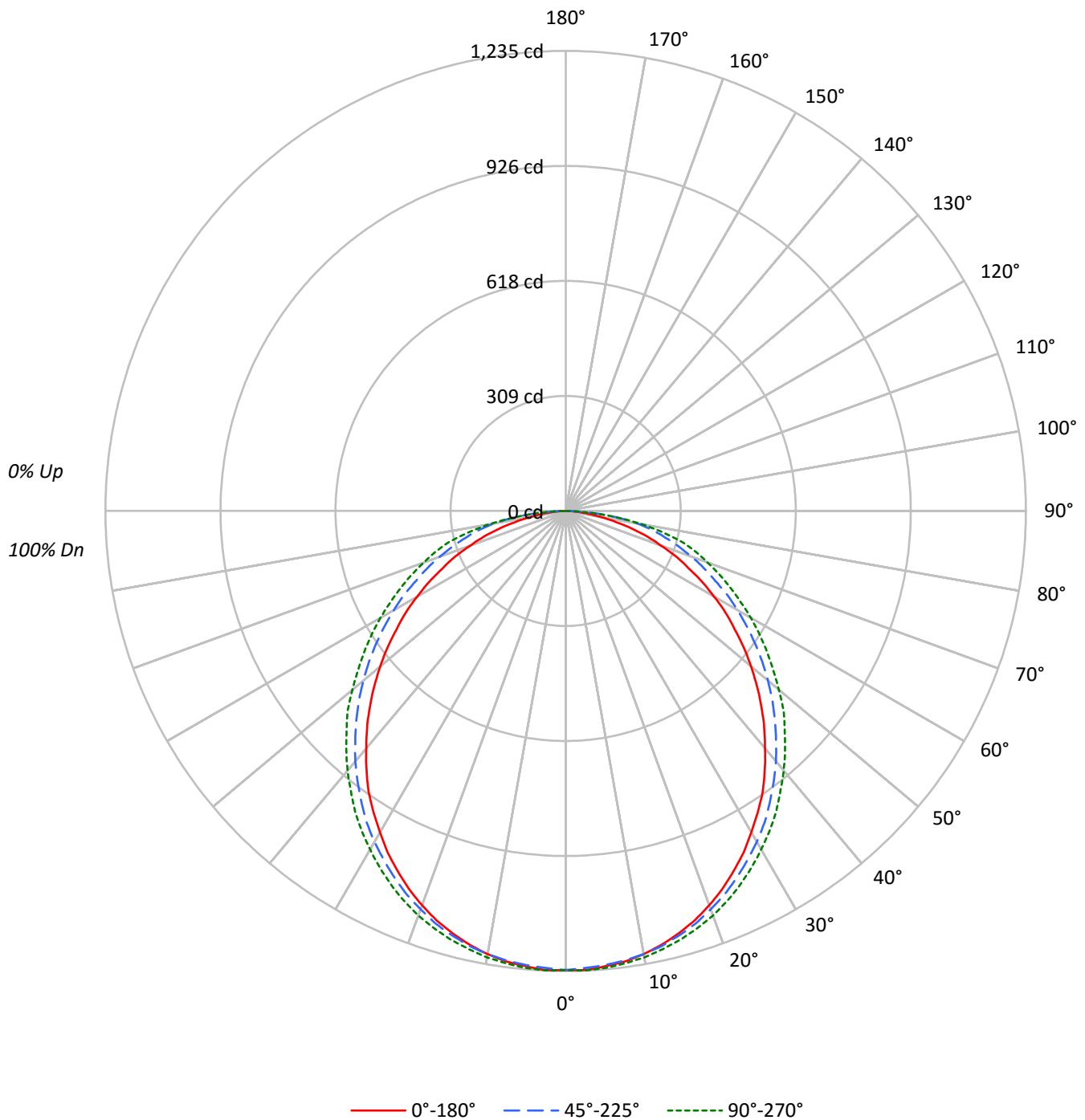
Input Watts (W): 30.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	99	95	106	101	97	93	97	93	90		93	90	88		83
2	98	90	83	77	96	88	81	76	84	79	74		81	76	72		69
3	89	79	70	64	87	77	69	63	74	67	62		71	66	61		58
4	82	70	61	54	80	68	60	54	66	59	53		63	57	52		49
5	75	62	53	46	73	61	53	46	59	51	46		57	50	45		42
6	70	56	47	40	68	55	47	40	53	46	40		52	45	40		37
7	64	51	42	36	63	50	42	36	48	41	35		47	40	35		33
8	60	46	38	32	58	46	37	32	44	37	32		43	36	31		29
9	56	43	34	29	55	42	34	29	41	34	28		40	33	28		26
10	53	39	31	26	51	39	31	26	38	31	26		37	30	26		24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1658	1658	1658
5°	1657	1652	1663
10°	1650	1650	1662
15°	1634	1642	1659
20°	1613	1629	1654
25°	1583	1613	1644
30°	1548	1594	1631
35°	1514	1568	1618
40°	1462	1542	1599
45°	1414	1512	1582
50°	1360	1483	1563
55°	1299	1456	1547
60°	1238	1433	1544
65°	1160	1408	1554
70°	1074	1416	1596
75°	962	1443	1686
80°	777	1528	1649
85°	585	1342	1308



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	116.7	3.3
10°-20°	333.4	9.5
20°-30°	501.1	14.3
30°-40°	596.9	17.0
40°-50°	610.9	17.4
50°-60°	550.0	15.7
60°-70°	431.9	12.3
70°-80°	280.3	8.0
80°-90°	86.7	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°	951.2	27.1
0°-40°	1548.1	44.1
0°-60°	2709.0	77.2
0°-90°	3508.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3508.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1232	1232	1232	1232	1232	
5°	1227	1229	1224	1230	1231	117
15°	1173	1177	1179	1189	1191	331
25°	1066	1075	1086	1104	1108	491
35°	922	933	955	978	985	575
45°	743	761	794	825	831	573
55°	554	578	621	653	660	496
65°	364	392	442	479	488	363
75°	185	221	278	315	324	196
85°	38	70	87	85	85	46
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1232.4	1232.4	1232.4	1232.4	1232.4
2.5°	1233.5	1233.5	1227.9	1233.5	1234.6
5°	1226.8	1229.0	1223.5	1230.2	1231.3
7.5°	1220.1	1220.1	1216.8	1223.5	1224.6
10°	1207.9	1209.0	1207.9	1215.7	1216.8
12.5°	1192.3	1194.5	1195.6	1203.4	1204.5
15°	1173.3	1176.7	1178.9	1188.9	1191.2
17.5°	1152.2	1155.5	1161.1	1172.2	1174.4
20°	1126.5	1131.0	1137.7	1152.2	1155.5
22.5°	1098.7	1103.1	1114.3	1127.6	1133.2
25°	1066.4	1075.3	1086.4	1104.2	1107.6
27.5°	1034.0	1041.8	1056.3	1075.3	1079.7
30°	996.2	1008.4	1026.2	1045.2	1049.6
32.5°	959.4	971.6	992.8	1012.9	1018.4
35°	921.5	932.6	954.9	978.3	985.0
37.5°	878.0	892.5	917.0	940.4	947.1
40°	832.4	850.2	878.0	902.6	910.4
42.5°	788.9	807.8	835.7	862.4	871.4
45°	743.2	761.0	794.5	824.6	831.2
47.5°	696.4	716.5	752.1	782.2	793.4
50°	649.6	670.8	708.7	739.9	746.6
52.5°	602.8	625.1	665.2	698.6	702.0
55°	553.8	578.3	620.6	653.0	659.6
57.5°	509.2	530.4	576.1	609.5	617.3
60°	460.2	483.6	532.6	563.8	573.8
62.5°	413.4	437.9	489.2	520.4	529.3
65°	364.4	392.2	442.4	479.1	488.1
67.5°	322.0	348.8	402.3	437.9	446.8
70°	273.0	303.1	359.9	396.7	405.6
72.5°	230.7	261.9	318.7	354.3	367.7
75°	185.0	220.6	277.5	315.3	324.3
77.5°	140.4	181.6	239.6	268.5	268.5
80°	100.3	143.7	197.2	210.6	212.8
82.5°	65.7	108.1	146.0	144.9	144.9
85°	37.9	70.2	86.9	84.7	84.7
87.5°	14.5	29.0	31.2	31.2	30.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)