

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: P314302

Luminaire Tested: **24FCZ2-40-UNV-L83050-S-CP125-W2A-U-4000K**

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: P314302
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-L83050-S-CP125-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" POLYCARB SHEET
Light Source: (168) 4000K 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: 3989.0 lumens
Efficiency: N/A
Efficacy: 119.1 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

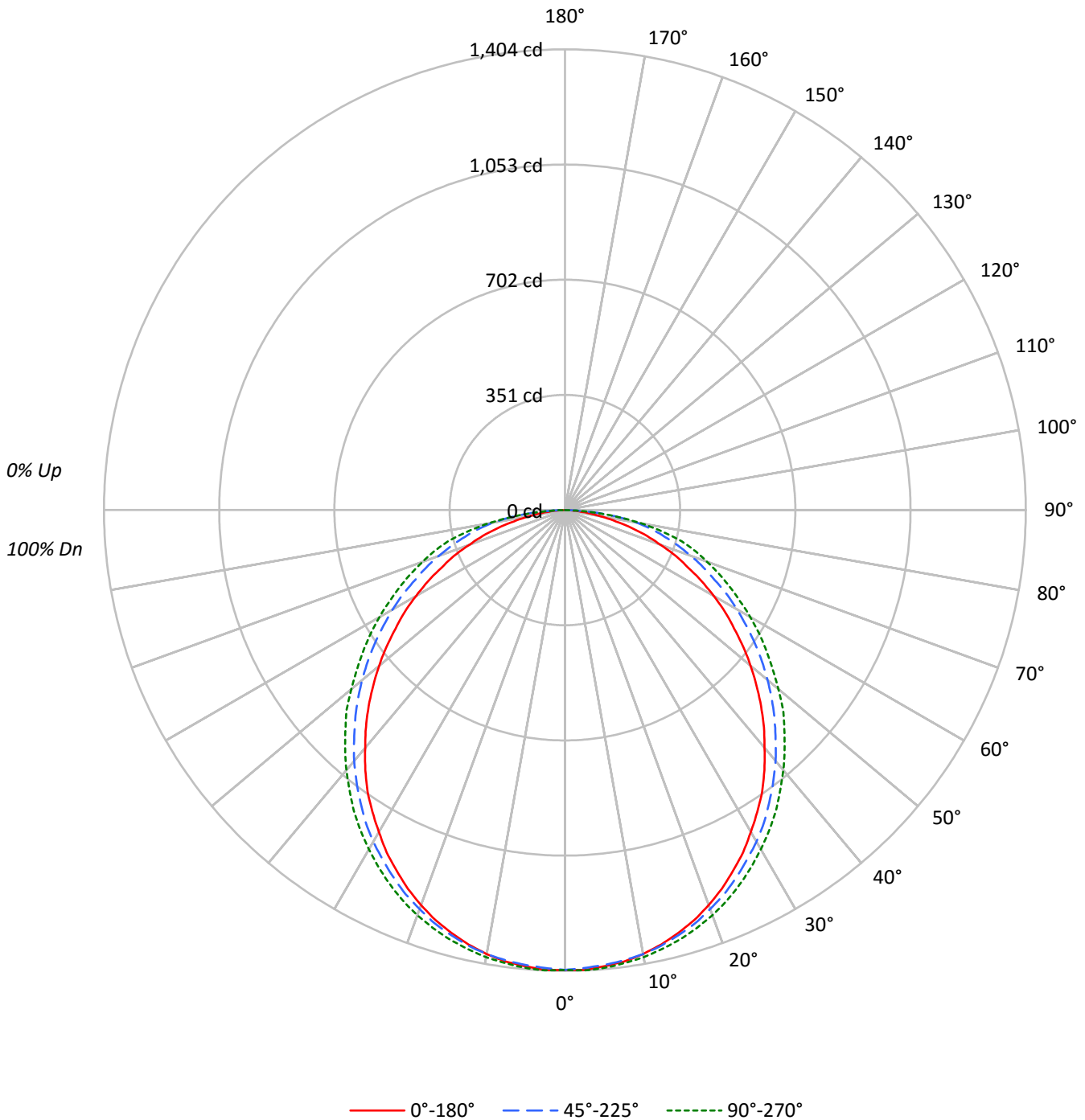
Input Watts (W): 33.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1886	1886	1886
5°	1884	1879	1891
10°	1877	1877	1890
15°	1858	1867	1887
20°	1834	1852	1881
25°	1800	1834	1870
30°	1760	1813	1854
35°	1721	1784	1840
40°	1662	1754	1818
45°	1608	1719	1799
50°	1546	1687	1777
55°	1477	1655	1760
60°	1408	1630	1756
65°	1319	1601	1767
70°	1221	1610	1814
75°	1093	1640	1917
80°	883	1738	1875
85°	665	1525	1487



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	132.7	3.3
10°-20°	379.1	9.5
20°-30°	569.8	14.3
30°-40°	678.8	17.0
40°-50°	694.7	17.4
50°-60°	625.4	15.7
60°-70°	491.2	12.3
70°-80°	318.8	8.0
80°-90°	98.6	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°	1081.6	27.1
0°-40°	1760.4	44.1
0°-60°	3080.5	77.2
0°-90°	3989.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3989.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1401	1401	1401	1401	1401	
5°	1395	1398	1391	1399	1400	133
15°	1334	1338	1340	1352	1354	376
25°	1213	1223	1235	1256	1260	559
35°	1048	1060	1086	1112	1120	654
45°	845	865	903	938	945	652
55°	630	658	706	742	750	565
65°	414	446	503	545	555	412
75°	210	251	316	359	369	223
85°	43	80	99	96	96	52
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1401.4	1401.4	1401.4	1401.4	1401.4
2.5°	1402.6	1402.6	1396.3	1402.6	1403.9
5°	1395.0	1397.6	1391.2	1398.8	1400.1
7.5°	1387.4	1387.4	1383.6	1391.2	1392.5
10°	1373.5	1374.8	1373.5	1382.4	1383.6
12.5°	1355.7	1358.3	1359.5	1368.4	1369.7
15°	1334.2	1338.0	1340.5	1351.9	1354.5
17.5°	1310.1	1313.9	1320.3	1332.9	1335.5
20°	1281.0	1286.1	1293.7	1310.1	1313.9
22.5°	1249.3	1254.4	1267.1	1282.3	1288.6
25°	1212.6	1222.7	1235.4	1255.7	1259.5
27.5°	1175.8	1184.7	1201.2	1222.7	1227.8
30°	1132.7	1146.7	1167.0	1188.5	1193.6
32.5°	1090.9	1104.9	1128.9	1151.8	1158.1
35°	1047.9	1060.5	1085.9	1112.5	1120.1
37.5°	998.4	1014.9	1042.8	1069.4	1077.0
40°	946.5	966.8	998.4	1026.3	1035.2
42.5°	897.1	918.6	950.3	980.7	990.8
45°	845.1	865.4	903.4	937.6	945.2
47.5°	791.9	814.7	855.3	889.5	902.1
50°	738.7	762.8	805.8	841.3	848.9
52.5°	685.5	710.8	756.4	794.4	798.2
55°	629.7	657.6	705.7	742.5	750.1
57.5°	579.0	603.1	655.1	693.1	701.9
60°	523.3	549.9	605.7	641.1	652.5
62.5°	470.1	498.0	556.2	591.7	601.9
65°	414.3	446.0	503.0	544.8	555.0
67.5°	366.2	396.6	457.4	498.0	508.1
70°	310.4	344.6	409.3	451.1	461.2
72.5°	262.3	297.8	362.4	402.9	418.1
75°	210.3	250.9	315.5	358.6	368.7
77.5°	159.6	206.5	272.4	305.4	305.4
80°	114.0	163.4	224.3	239.5	242.0
82.5°	74.8	122.9	166.0	164.7	164.7
85°	43.1	79.8	98.8	96.3	96.3
87.5°	16.5	32.9	35.5	35.5	34.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)