

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: P311344

Luminaire Tested: **24FCZ2-35-UNV-L82765-S-CP250-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: P311344
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: 24FCZ2-35-UNV-L82765-S-CP250-W2A-U-6500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.250" 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: 3315.0 lumens
Efficiency: N/A
Efficacy: 113.5 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

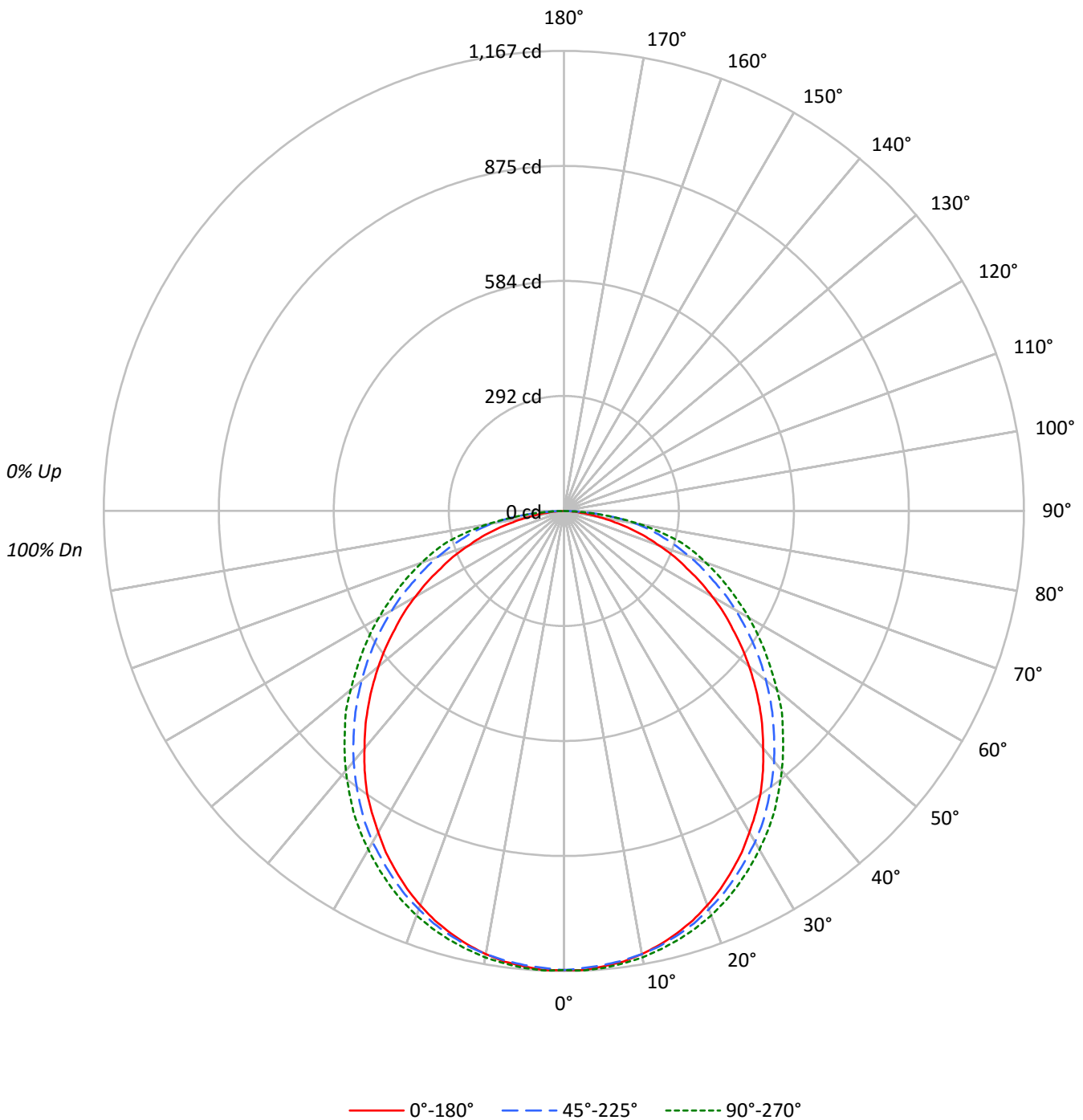
Input Watts (W): 29.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1567	1567	1567
5°	1566	1562	1571
10°	1559	1559	1571
15°	1545	1552	1568
20°	1524	1539	1563
25°	1496	1524	1554
30°	1463	1507	1541
35°	1430	1482	1529
40°	1382	1457	1511
45°	1336	1429	1495
50°	1285	1402	1477
55°	1228	1376	1462
60°	1170	1354	1459
65°	1096	1331	1468
70°	1015	1338	1508
75°	909	1363	1593
80°	735	1444	1558
85°	553	1267	1235



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	110.3	3.3
10°-20°	315.0	9.5
20°-30°	473.6	14.3
30°-40°	564.1	17.0
40°-50°	577.3	17.4
50°-60°	519.8	15.7
60°-70°	408.2	12.3
70°-80°	264.9	8.0
80°-90°	81.9	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°	898.8	27.1
0°-40°	1462.9	44.1
0°-60°	2560.0	77.2
0°-90°	3315.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3315.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1165	1165	1165	1165	1165	
5°	1159	1161	1156	1162	1164	110
15°	1109	1112	1114	1124	1126	313
25°	1008	1016	1027	1044	1047	464
35°	871	881	902	924	931	543
45°	702	719	751	779	786	541
55°	523	546	586	617	623	469
65°	344	371	418	453	461	343
75°	175	208	262	298	306	185
85°	36	66	82	80	80	43
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1164.6	1164.6	1164.6	1164.6	<i>1164.6</i>
2.5°	<i>1165.6</i>	<i>1165.6</i>	<i>1160.4</i>	<i>1165.6</i>	<i>1166.7</i>
5°	1159.3	1161.4	1156.2	1162.5	<i>1163.5</i>
7.5°	1153.0	1153.0	1149.8	1156.2	<i>1157.2</i>
10°	1141.4	1142.5	1141.4	1148.8	<i>1149.8</i>
12.5°	1126.7	1128.8	1129.8	1137.2	<i>1138.3</i>
15°	1108.8	1111.9	1114.0	1123.5	<i>1125.6</i>
17.5°	1088.8	1091.9	1097.2	1107.7	<i>1109.8</i>
20°	1064.5	1068.8	1075.1	1088.8	<i>1091.9</i>
22.5°	1038.2	1042.4	1053.0	1065.6	<i>1070.9</i>
25°	1007.7	1016.1	1026.6	1043.5	<i>1046.6</i>
27.5°	977.2	984.5	998.2	1016.1	<i>1020.3</i>
30°	941.4	952.9	969.8	987.7	<i>991.9</i>
32.5°	906.6	918.2	938.2	957.1	<i>962.4</i>
35°	870.8	881.3	902.4	924.5	<i>930.8</i>
37.5°	829.7	843.4	866.6	888.7	<i>895.0</i>
40°	786.6	803.4	829.7	852.9	<i>860.3</i>
42.5°	745.5	763.4	789.7	815.0	<i>823.4</i>
45°	702.3	719.2	750.8	779.2	<i>785.5</i>
47.5°	658.1	677.1	710.8	739.2	<i>749.7</i>
50°	613.9	633.9	669.7	699.2	<i>705.5</i>
52.5°	569.7	590.7	628.6	660.2	<i>663.4</i>
55°	523.3	546.5	586.5	617.0	<i>623.4</i>
57.5°	481.2	501.2	544.4	576.0	<i>583.3</i>
60°	434.9	457.0	503.3	532.8	<i>542.3</i>
62.5°	390.7	413.8	462.3	491.7	<i>500.2</i>
65°	344.3	370.6	418.0	452.8	<i>461.2</i>
67.5°	304.3	329.6	380.1	413.8	<i>422.2</i>
70°	258.0	286.4	340.1	374.9	<i>383.3</i>
72.5°	218.0	247.4	301.1	334.8	<i>347.5</i>
75°	174.8	208.5	262.2	298.0	<i>306.4</i>
77.5°	132.7	171.6	226.4	253.8	<i>253.8</i>
80°	94.8	135.8	186.4	199.0	<i>201.1</i>
82.5°	62.1	102.1	137.9	136.9	<i>136.9</i>
85°	35.8	66.3	82.1	80.0	<i>80.0</i>
87.5°	13.7	27.4	29.5	29.5	<i>28.4</i>
90°	0.0	0.0	0.0	0.0	<i>0.0</i>

(END OF REPORT)