

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: P314264

Luminaire Tested: **24FCZ2-35-UNV-L83050-S-CP250-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: P314264
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-L83050-S-CP250-W2A-U-5000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.250" 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: 3362.0 lumens
Efficiency: N/A
Efficacy: 114.4 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

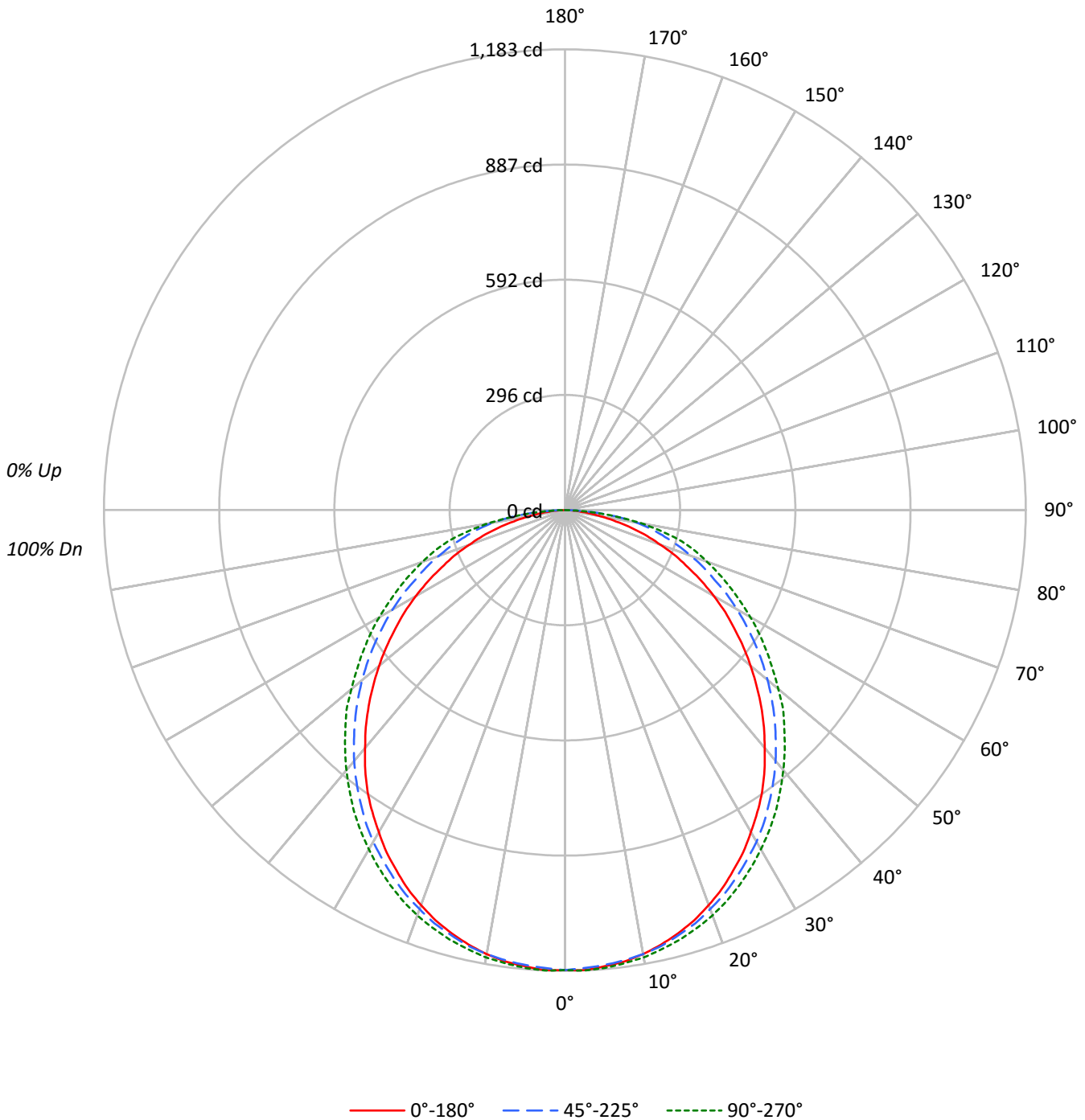
Input Watts (W): 29.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1589	1589	1589
5°	1588	1584	1594
10°	1582	1582	1593
15°	1566	1574	1590
20°	1546	1561	1586
25°	1517	1546	1576
30°	1483	1528	1563
35°	1451	1503	1551
40°	1401	1478	1532
45°	1355	1449	1516
50°	1303	1422	1498
55°	1245	1395	1483
60°	1187	1374	1480
65°	1112	1350	1489
70°	1029	1357	1529
75°	922	1382	1616
80°	745	1464	1581
85°	560	1286	1254



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	111.8	3.3
10°-20°	319.5	9.5
20°-30°	480.3	14.3
30°-40°	572.1	17.0
40°-50°	585.5	17.4
50°-60°	527.1	15.7
60°-70°	414.0	12.3
70°-80°	268.7	8.0
80°-90°	83.1	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°	911.6	27.1
0°-40°	1483.7	44.1
0°-60°	2596.3	77.2
0°-90°	3362.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3362.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1181	1181	1181	1181	1181	
5°	1176	1178	1172	1179	1180	112
15°	1124	1128	1130	1139	1142	317
25°	1022	1030	1041	1058	1062	471
35°	883	894	915	938	944	551
45°	712	729	761	790	797	549
55°	531	554	595	626	632	476
65°	349	376	424	459	468	348
75°	177	211	266	302	311	188
85°	36	67	83	81	81	44
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1181.1	1181.1	1181.1	1181.1	<i>1181.1</i>
2.5°	<i>1182.2</i>	<i>1182.2</i>	<i>1176.8</i>	<i>1182.2</i>	<i>1183.2</i>
5°	1175.8	1177.9	1172.5	1179.0	<i>1180.0</i>
7.5°	1169.3	1169.3	1166.1	1172.5	<i>1173.6</i>
10°	1157.6	1158.7	1157.6	1165.1	<i>1166.1</i>
12.5°	1142.6	1144.8	1145.9	1153.3	<i>1154.4</i>
15°	1124.5	1127.7	1129.8	1139.4	<i>1141.6</i>
17.5°	1104.2	1107.4	1112.7	1123.4	<i>1125.6</i>
20°	1079.6	1083.9	1090.3	1104.2	<i>1107.4</i>
22.5°	1052.9	1057.2	1067.9	1080.7	<i>1086.0</i>
25°	1022.0	1030.5	1041.2	1058.3	<i>1061.5</i>
27.5°	991.0	998.5	1012.4	1030.5	<i>1034.8</i>
30°	954.7	966.4	983.5	1001.7	<i>1006.0</i>
32.5°	919.5	931.2	951.5	970.7	<i>976.1</i>
35°	883.1	893.8	915.2	937.6	<i>944.0</i>
37.5°	841.5	855.4	878.9	901.3	<i>907.7</i>
40°	797.7	814.8	841.5	865.0	<i>872.5</i>
42.5°	756.1	774.2	800.9	826.6	<i>835.1</i>
45°	712.3	729.4	761.4	790.2	<i>796.7</i>
47.5°	667.4	686.7	720.8	749.7	<i>760.3</i>
50°	622.6	642.9	679.2	709.1	<i>715.5</i>
52.5°	577.7	599.1	637.5	669.6	<i>672.8</i>
55°	530.7	554.2	594.8	625.8	<i>632.2</i>
57.5°	488.0	508.3	552.1	584.1	<i>591.6</i>
60°	441.0	463.5	510.5	540.4	<i>550.0</i>
62.5°	396.2	419.7	468.8	498.7	<i>507.3</i>
65°	349.2	375.9	424.0	459.2	<i>467.7</i>
67.5°	308.6	334.3	385.5	419.7	<i>428.2</i>
70°	261.6	290.5	344.9	380.2	<i>388.7</i>
72.5°	221.1	251.0	305.4	339.6	<i>352.4</i>
75°	177.3	211.4	265.9	302.2	<i>310.8</i>
77.5°	134.6	174.1	229.6	257.4	<i>257.4</i>
80°	96.1	137.8	189.0	201.8	<i>204.0</i>
82.5°	63.0	103.6	139.9	138.8	<i>138.8</i>
85°	36.3	67.3	83.3	81.2	<i>81.2</i>
87.5°	13.9	27.8	29.9	29.9	<i>28.8</i>
90°	0.0	0.0	0.0	0.0	<i>0.0</i>

(END OF REPORT)