

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: P314262

Luminaire Tested: **24FCZ2-35-UNV-L83050-S-CP250-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: P314262
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-4000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.250" 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: 3330.0 lumens
Efficiency: N/A
Efficacy: 116.4 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

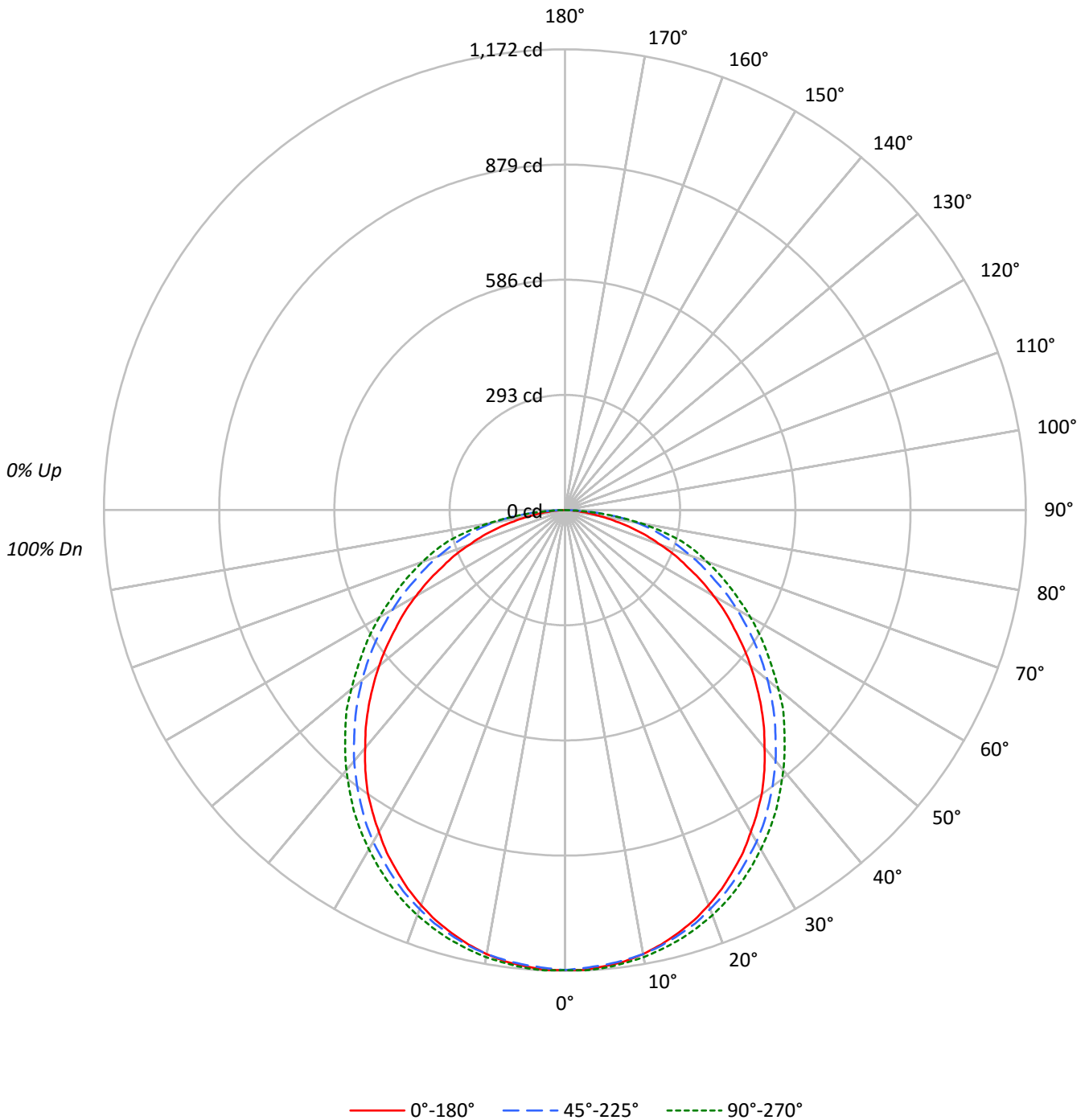
Input Watts (W): 28.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1574	1574	1574
5°	1573	1569	1579
10°	1567	1567	1578
15°	1551	1559	1575
20°	1531	1546	1571
25°	1503	1531	1561
30°	1469	1514	1548
35°	1437	1489	1536
40°	1388	1464	1518
45°	1342	1435	1502
50°	1291	1408	1483
55°	1233	1382	1469
60°	1175	1361	1466
65°	1101	1337	1475
70°	1019	1344	1515
75°	913	1369	1600
80°	738	1450	1565
85°	556	1274	1241



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	110.7	3.3
10°-20°	316.5	9.5
20°-30°	475.7	14.3
30°-40°	566.6	17.0
40°-50°	579.9	17.4
50°-60°	522.1	15.7
60°-70°	410.0	12.3
70°-80°	266.1	8.0
80°-90°	82.3	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°	902.9	27.1
0°-40°	1469.5	44.1
0°-60°	2571.6	77.2
0°-90°	3330.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3330.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1170	1170	1170	1170	1170	
5°	1165	1167	1161	1168	1169	111
15°	1114	1117	1119	1129	1131	314
25°	1012	1021	1031	1048	1051	466
35°	875	885	906	929	935	546
45°	706	722	754	783	789	544
55°	526	549	589	620	626	471
65°	346	372	420	455	463	344
75°	176	209	263	299	308	186
85°	36	67	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°	1169.9	1169.9	1169.9	1169.9	1169.9
2.5°	1170.9	1170.9	1165.6	1170.9	1172.0
5°	1164.6	1166.7	1161.4	1167.7	1168.8
7.5°	1158.2	1158.2	1155.0	1161.4	1162.4
10°	1146.6	1147.6	1146.6	1154.0	1155.0
12.5°	1131.8	1133.9	1134.9	1142.3	1143.4
15°	1113.8	1117.0	1119.1	1128.6	1130.7
17.5°	1093.7	1096.9	1102.2	1112.7	1114.8
20°	1069.4	1073.6	1079.9	1093.7	1096.9
22.5°	1042.9	1047.2	1057.7	1070.4	1075.7
25°	1012.2	1020.7	1031.3	1048.2	1051.4
27.5°	981.6	989.0	1002.7	1020.7	1024.9
30°	945.6	957.2	974.2	992.2	996.4
32.5°	910.7	922.3	942.4	961.5	966.8
35°	874.7	885.3	906.5	928.7	935.0
37.5°	833.5	847.2	870.5	892.7	899.1
40°	790.1	807.0	833.5	856.8	864.2
42.5°	748.9	766.9	793.3	818.7	827.1
45°	705.5	722.4	754.2	782.7	789.1
47.5°	661.1	680.1	714.0	742.5	753.1
50°	616.7	636.8	672.7	702.3	708.7
52.5°	572.2	593.4	631.5	663.2	666.4
55°	525.7	549.0	589.2	619.8	626.2
57.5°	483.4	503.5	546.8	578.6	586.0
60°	436.8	459.1	505.6	535.2	544.7
62.5°	392.4	415.7	464.3	494.0	502.4
65°	345.9	372.3	419.9	454.8	463.3
67.5°	305.7	331.1	381.8	415.7	424.2
70°	259.1	287.7	341.6	376.6	385.0
72.5°	219.0	248.6	302.5	336.4	349.1
75°	175.6	209.4	263.4	299.3	307.8
77.5°	133.3	172.4	227.4	254.9	254.9
80°	95.2	136.4	187.2	199.9	202.0
82.5°	62.4	102.6	138.6	137.5	137.5
85°	36.0	66.6	82.5	80.4	80.4
87.5°	13.8	27.5	29.6	29.6	28.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)