

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: P311296

Luminaire Tested: **24FCZ2-35HE-UNV-L82765-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: P311296  
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: 24FCZ2-35HE-UNV-L82765-S-CP250-W2A-U-5000K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.250" POLYCARB SHEET  
Light Source: (336) 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**

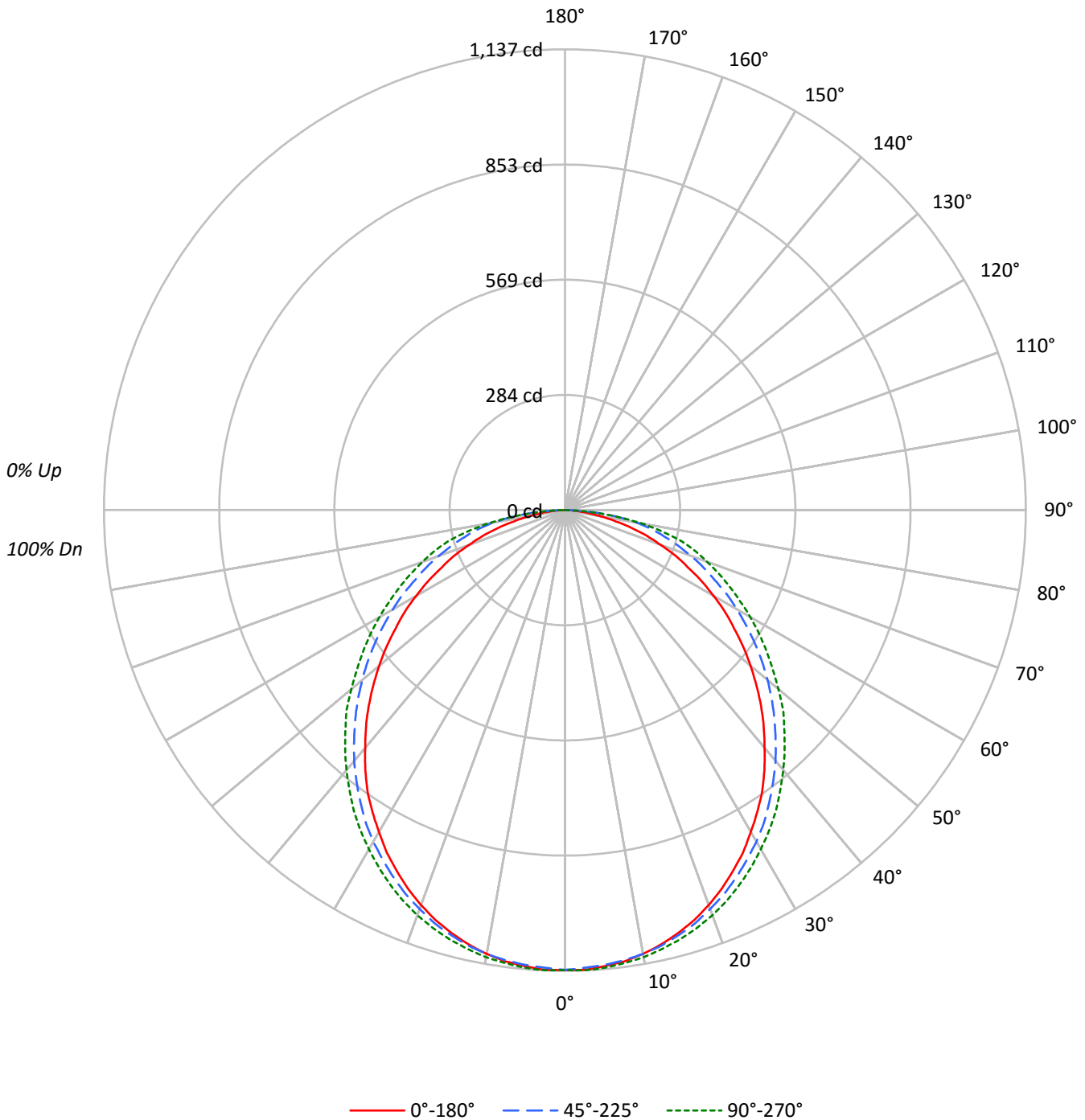
Lumens per Lamp: N/A  
Luminaire Lumens: 3230.0 lumens  
Efficiency: N/A  
Efficacy: 121.4 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 26.6  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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°	1527	1527	1527
5°	1526	1521	1531
10°	1519	1519	1531
15°	1505	1512	1528
20°	1485	1500	1523
25°	1458	1485	1514
30°	1425	1468	1502
35°	1394	1444	1490
40°	1346	1420	1472
45°	1302	1392	1456
50°	1252	1366	1439
55°	1196	1341	1425
60°	1140	1320	1422
65°	1068	1297	1431
70°	989	1304	1469
75°	885	1328	1552
80°	715	1407	1519
85°	539	1235	1204



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	107.4	3.3
10°-20°	307.0	9.5
20°-30°	461.4	14.3
30°-40°	549.6	17.0
40°-50°	562.5	17.4
50°-60°	506.4	15.7
60°-70°	397.7	12.3
70°-80°	258.1	8.0
80°-90°	79.8	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°	875.8	27.1
0°-40°	1425.4	44.1
0°-60°	2494.3	77.2
0°-90°	3230.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3230.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1135	1135	1135	1135	1135	
5°	1130	1132	1126	1133	1134	107
15°	1080	1083	1086	1095	1097	305
25°	982	990	1000	1017	1020	452
35°	848	859	879	901	907	529
45°	684	701	732	759	765	528
55°	510	532	572	601	607	457
65°	336	361	407	441	449	334
75°	170	203	256	290	299	180
85°	35	65	80	78	78	42
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1134.7	1134.7	1134.7	1134.7	1134.7
2.5°	1135.7	1135.7	1130.6	1135.7	1136.8
5°	1129.6	1131.6	1126.5	1132.7	1133.7
7.5°	1123.4	1123.4	1120.4	1126.5	1127.5
10°	1112.1	1113.2	1112.1	1119.3	1120.4
12.5°	1097.8	1099.8	1100.9	1108.0	1109.1
15°	1080.3	1083.4	1085.5	1094.7	1096.8
17.5°	1060.9	1063.9	1069.1	1079.3	1081.4
20°	1037.3	1041.4	1047.5	1060.9	1063.9
22.5°	1011.6	1015.7	1026.0	1038.3	1043.4
25°	981.9	990.1	1000.3	1016.7	1019.8
27.5°	952.1	959.3	972.6	990.1	994.2
30°	917.2	928.5	944.9	962.4	966.5
32.5°	883.4	894.6	914.1	932.6	937.7
35°	848.5	858.7	879.3	900.8	907.0
37.5°	808.5	821.8	844.4	865.9	872.1
40°	766.4	782.8	808.5	831.0	838.2
42.5°	726.4	743.8	769.5	794.1	802.3
45°	684.3	700.7	731.5	759.2	765.4
47.5°	641.2	659.7	692.5	720.2	730.5
50°	598.1	617.6	652.5	681.2	687.4
52.5°	555.0	575.6	612.5	643.3	646.4
55°	509.9	532.5	571.5	601.2	607.4
57.5°	468.9	488.4	530.4	561.2	568.4
60°	423.7	445.3	490.4	519.1	528.4
62.5°	380.6	403.2	450.4	479.1	487.3
65°	335.5	361.1	407.3	441.2	449.4
67.5°	296.5	321.1	370.4	403.2	411.4
70°	251.4	279.1	331.4	365.2	373.5
72.5°	212.4	241.1	293.4	326.3	338.6
75°	170.3	203.1	255.5	290.3	298.6
77.5°	129.3	167.2	220.6	247.3	247.3
80°	92.3	132.3	181.6	193.9	196.0
82.5°	60.5	99.5	134.4	133.4	133.4
85°	34.9	64.6	80.0	78.0	78.0
87.5°	13.3	26.7	28.7	28.7	27.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)