

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: P314189

Luminaire Tested: **24FCZ2-30HE-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: P314189  
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: 24FCZ2-30HE-UNV-L83050-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**

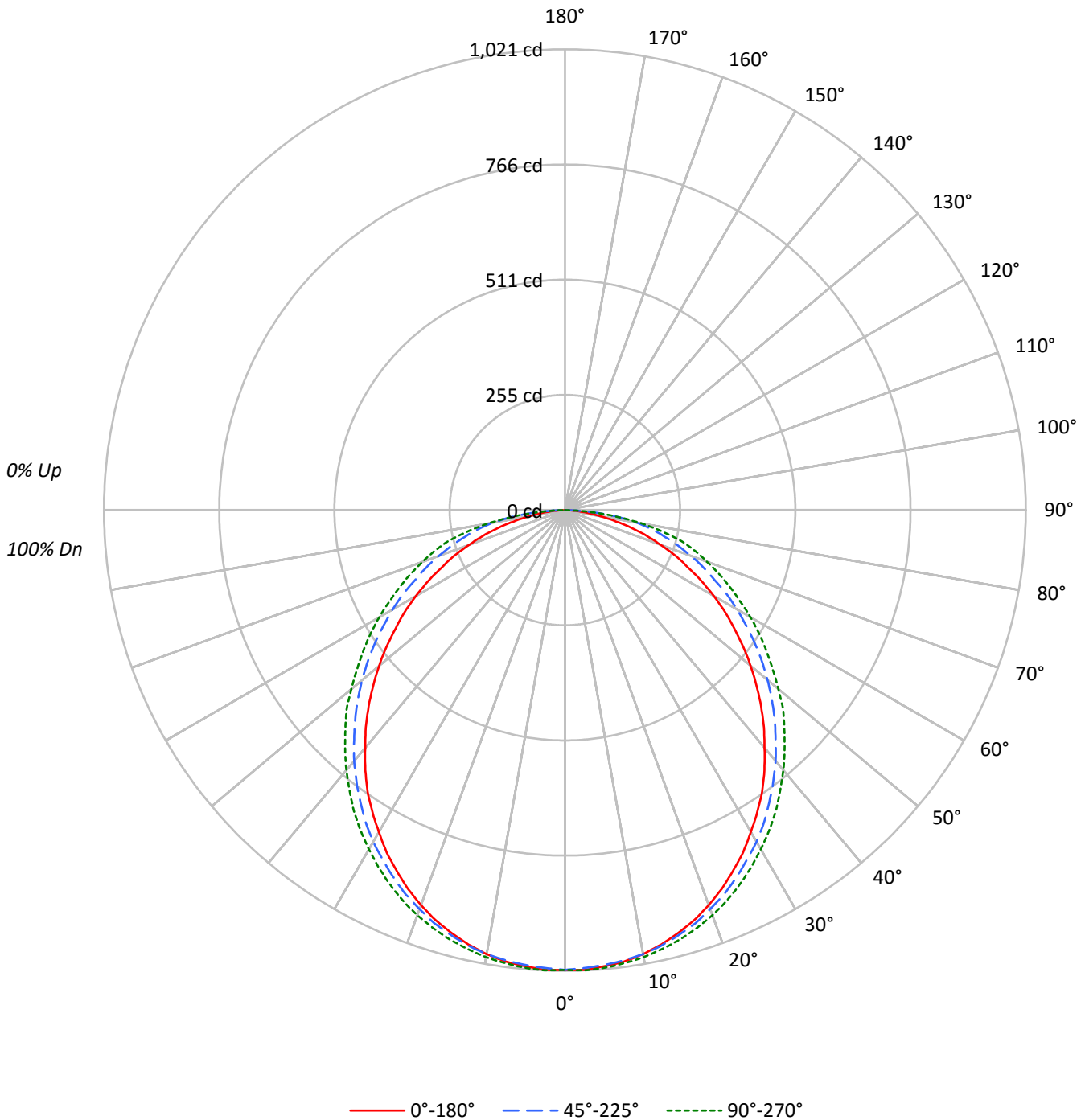
Lumens per Lamp: N/A  
Luminaire Lumens: 2901.0 lumens  
Efficiency: N/A  
Efficacy: 131.3 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 22.1  
Input Voltage (V): NR  
Input Current (A<sub>in</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°	1371	1371	1371
5°	1370	1367	1375
10°	1365	1365	1375
15°	1352	1358	1372
20°	1334	1347	1368
25°	1309	1334	1360
30°	1280	1319	1349
35°	1252	1297	1338
40°	1209	1275	1322
45°	1169	1250	1308
50°	1124	1227	1292
55°	1074	1204	1280
60°	1024	1185	1277
65°	959	1165	1285
70°	888	1171	1319
75°	795	1193	1394
80°	642	1264	1364
85°	483	1110	1081



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	96.5	3.3
10°-20°	275.7	9.5
20°-30°	414.4	14.3
30°-40°	493.6	17.0
40°-50°	505.2	17.4
50°-60°	454.8	15.7
60°-70°	357.2	12.3
70°-80°	231.8	8.0
80°-90°	71.7	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°	786.6	27.1
0°-40°	1280.2	44.1
0°-60°	2240.3	77.2
0°-90°	2901.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2901.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1019	1019	1019	1019	1019	
5°	1014	1016	1012	1017	1018	96
15°	970	973	975	983	985	274
25°	882	889	898	913	916	406
35°	762	771	790	809	815	475
45°	615	629	657	682	687	474
55°	458	478	513	540	546	411
65°	301	324	366	396	404	300
75°	153	182	229	261	268	162
85°	31	58	72	70	70	38
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1019.1	1019.1	1019.1	1019.1	1019.1
2.5°	1020.1	1020.1	1015.5	1020.1	1021.0
5°	1014.5	1016.4	1011.8	1017.3	1018.2
7.5°	1009.0	1009.0	1006.2	1011.8	1012.7
10°	998.9	999.8	998.9	1005.3	1006.2
12.5°	986.0	987.8	988.7	995.2	996.1
15°	970.3	973.1	974.9	983.2	985.0
17.5°	952.8	955.6	960.2	969.4	971.2
20°	931.6	935.3	940.8	952.8	955.6
22.5°	908.6	912.3	921.5	932.5	937.1
25°	881.8	889.2	898.4	913.2	915.9
27.5°	855.1	861.6	873.5	889.2	892.9
30°	823.8	833.9	848.7	864.3	868.0
32.5°	793.4	803.5	821.0	837.6	842.2
35°	762.1	771.3	789.7	809.0	814.6
37.5°	726.1	738.1	758.4	777.7	783.2
40°	688.3	703.1	726.1	746.4	752.8
42.5°	652.4	668.1	691.1	713.2	720.6
45°	614.6	629.4	657.0	681.9	687.4
47.5°	575.9	592.5	622.0	646.9	656.1
50°	537.2	554.7	586.1	611.9	617.4
52.5°	498.5	516.9	550.1	577.8	580.5
55°	458.0	478.2	513.3	540.0	545.5
57.5°	421.1	438.6	476.4	504.0	510.5
60°	380.6	399.9	440.5	466.3	474.6
62.5°	341.9	362.1	404.5	430.3	437.7
65°	301.3	324.4	365.8	396.2	403.6
67.5°	266.3	288.4	332.6	362.1	369.5
70°	225.8	250.6	297.6	328.0	335.4
72.5°	190.7	216.5	263.5	293.0	304.1
75°	153.0	182.5	229.4	260.8	268.1
77.5°	116.1	150.2	198.1	222.1	222.1
80°	82.9	118.9	163.1	174.2	176.0
82.5°	54.4	89.4	120.7	119.8	119.8
85°	31.3	58.1	71.9	70.0	70.0
87.5°	12.0	24.0	25.8	25.8	24.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)