

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: P311184

Luminaire Tested: **24FCZ2-30HE-UNV-L82765-S-CP125-W2A-U-3000K**

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: P311184  
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-L82765-S-CP125-W2A-U-3000K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" POLYCARB SHEET  
Light Source: (336) 3000K 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**

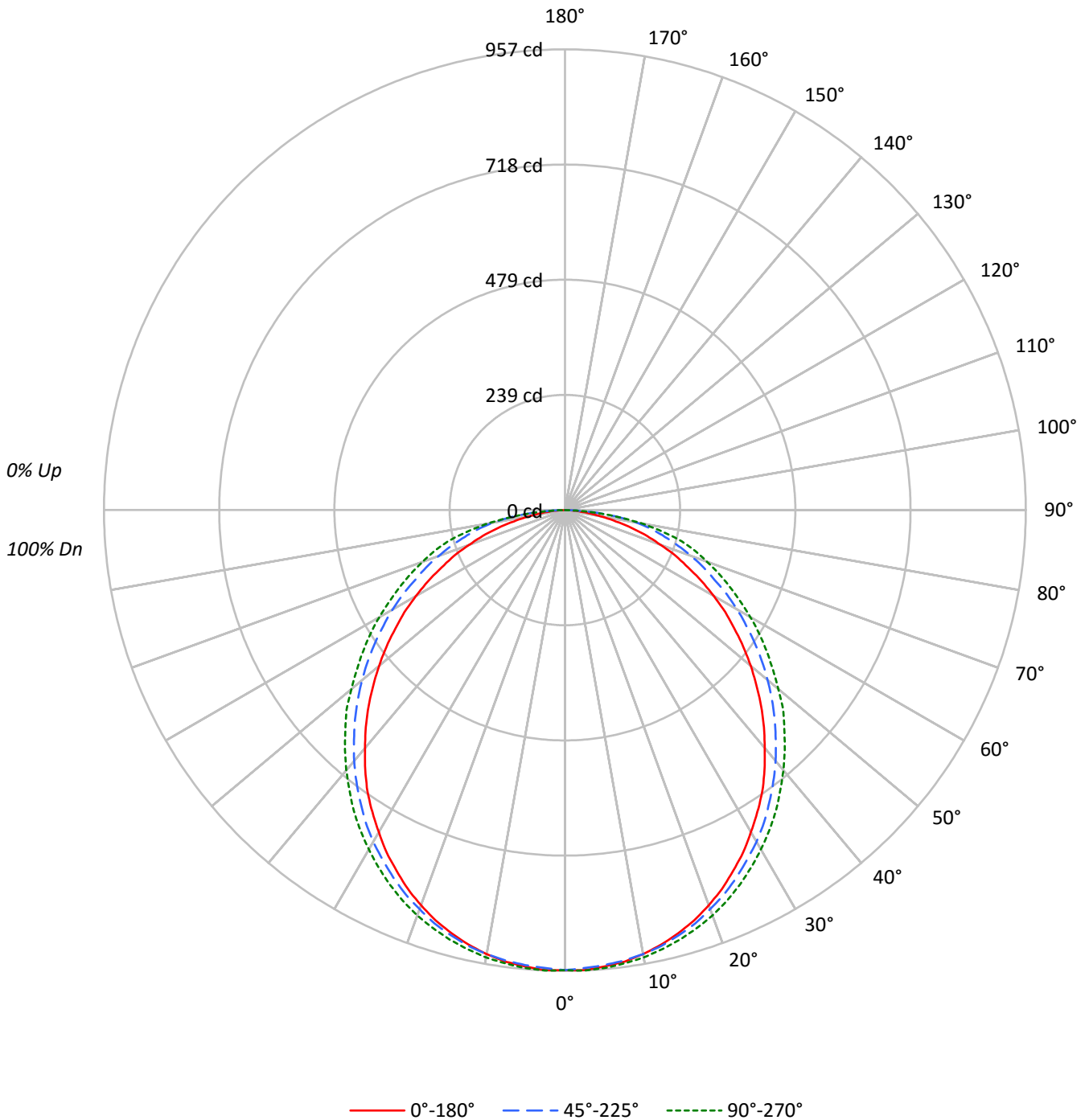
Lumens per Lamp: N/A  
Luminaire Lumens: 2720.0 lumens  
Efficiency: N/A  
Efficacy: 129.5 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 21  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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°	1286	1286	1286
5°	1285	1281	1289
10°	1279	1279	1289
15°	1267	1273	1287
20°	1251	1263	1283
25°	1227	1251	1275
30°	1200	1236	1265
35°	1174	1216	1255
40°	1134	1196	1240
45°	1097	1172	1226
50°	1054	1150	1212
55°	1007	1129	1200
60°	960	1111	1197
65°	899	1092	1205
70°	833	1098	1237
75°	745	1118	1307
80°	603	1185	1278
85°	454	1041	1014



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	90.5	3.3
10°-20°	258.5	9.5
20°-30°	388.6	14.3
30°-40°	462.8	17.0
40°-50°	473.7	17.4
50°-60°	426.5	15.7
60°-70°	334.9	12.3
70°-80°	217.4	8.0
80°-90°	67.2	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°	737.5	27.1
0°-40°	1200.3	44.1
0°-60°	2100.5	77.2
0°-90°	2720.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2720.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	956	956	956	956	956	
5°	951	953	949	954	955	90
15°	910	912	914	922	924	257
25°	827	834	842	856	859	381
35°	714	723	740	759	764	446
45°	576	590	616	639	644	444
55°	429	448	481	506	512	385
65°	282	304	343	372	378	281
75°	143	171	215	244	251	152
85°	29	54	67	66	66	35
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	955.6	955.6	955.6	955.6	955.6
2.5°	956.4	956.4	952.1	956.4	957.3
5°	951.2	953.0	948.6	953.8	954.7
7.5°	946.1	946.1	943.5	948.6	949.5
10°	936.5	937.4	936.5	942.6	943.5
12.5°	924.5	926.2	927.0	933.1	934.0
15°	909.8	912.4	914.1	921.9	923.6
17.5°	893.3	895.9	900.3	908.9	910.6
20°	873.5	876.9	882.1	893.3	895.9
22.5°	851.9	855.3	864.0	874.3	878.7
25°	826.8	833.7	842.4	856.2	858.8
27.5°	801.8	807.8	819.0	833.7	837.2
30°	772.4	781.9	795.7	810.4	813.9
32.5°	743.9	753.4	769.8	785.4	789.7
35°	714.5	723.1	740.4	758.6	763.8
37.5°	680.8	692.0	711.0	729.2	734.4
40°	645.4	659.2	680.8	699.8	705.9
42.5°	611.7	626.4	648.0	668.7	675.6
45°	576.3	590.1	616.0	639.3	644.5
47.5°	540.0	555.5	583.2	606.5	615.1
50°	503.7	520.1	549.5	573.7	578.9
52.5°	467.4	484.7	515.8	541.7	544.3
55°	429.4	448.4	481.2	506.3	511.5
57.5°	394.8	411.3	446.7	472.6	478.6
60°	356.8	375.0	413.0	437.2	444.9
62.5°	320.5	339.5	379.3	403.5	410.4
65°	282.5	304.1	343.0	371.5	378.4
67.5°	249.7	270.4	311.9	339.5	346.5
70°	211.7	235.0	279.1	307.6	314.5
72.5°	178.8	203.0	247.1	274.7	285.1
75°	143.4	171.1	215.1	244.5	251.4
77.5°	108.9	140.8	185.8	208.2	208.2
80°	77.8	111.5	152.9	163.3	165.0
82.5°	51.0	83.8	113.2	112.3	112.3
85°	29.4	54.4	67.4	65.7	65.7
87.5°	11.2	22.5	24.2	24.2	23.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)