

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: P311277

Luminaire Tested: **24FCZ2-35HE-UNV-L82765-S-CP125-W2A-U-4500K**

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: P311277  
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-CP125-W2A-U-4500K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" POLYCARB SHEET  
Light Source: (336) 4500K 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**

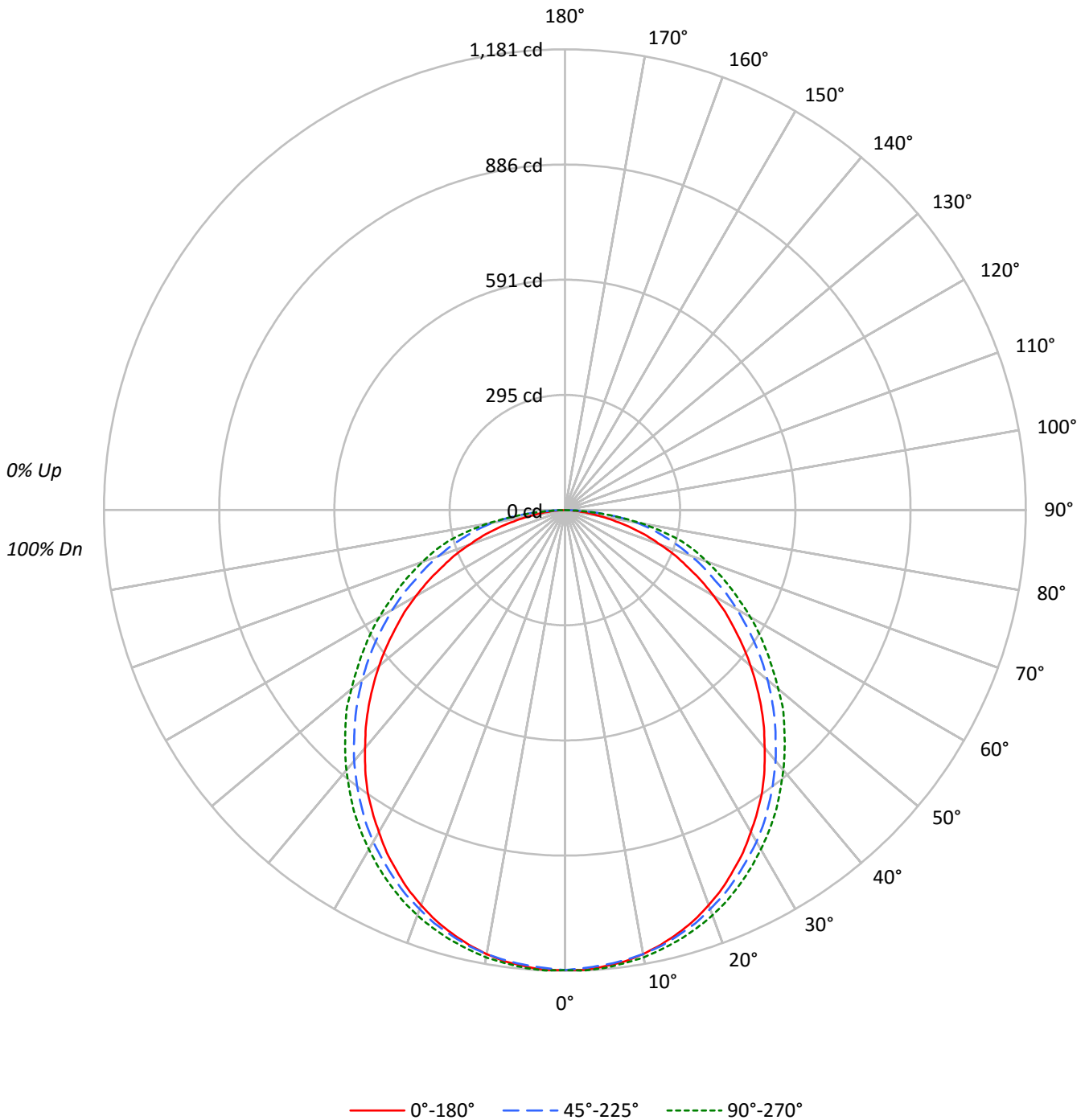
Lumens per Lamp: N/A  
Luminaire Lumens: 3356.0 lumens  
Efficiency: N/A  
Efficacy: 126.6 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 26.5  
Input Voltage (V): NR  
Input Current (A<sub>in</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°	1586	1586	1586
5°	1585	1581	1591
10°	1579	1579	1590
15°	1564	1571	1587
20°	1543	1558	1583
25°	1515	1543	1573
30°	1481	1525	1560
35°	1448	1501	1548
40°	1399	1475	1530
45°	1353	1446	1513
50°	1301	1419	1495
55°	1243	1393	1480
60°	1185	1371	1477
65°	1110	1347	1486
70°	1028	1354	1526
75°	920	1380	1613
80°	743	1462	1578
85°	559	1283	1250



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	111.6	3.3
10°-20°	318.9	9.5
20°-30°	479.4	14.3
30°-40°	571.1	17.0
40°-50°	584.5	17.4
50°-60°	526.2	15.7
60°-70°	413.2	12.3
70°-80°	268.2	8.0
80°-90°	82.9	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°	910.0	27.1
0°-40°	1481.0	44.1
0°-60°	2591.7	77.2
0°-90°	3356.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3356.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1179	1179	1179	1179	1179	
5°	1174	1176	1170	1177	1178	112
15°	1122	1126	1128	1137	1140	317
25°	1020	1029	1039	1056	1060	470
35°	882	892	914	936	942	550
45°	711	728	760	789	795	548
55°	530	553	594	625	631	475
65°	349	375	423	458	467	347
75°	177	211	265	302	310	187
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°	1179.0	1179.0	1179.0	1179.0	1179.0
2.5°	1180.1	1180.1	1174.7	1180.1	1181.1
5°	1173.7	1175.8	1170.5	1176.9	1177.9
7.5°	1167.3	1167.3	1164.1	1170.5	1171.5
10°	1155.5	1156.6	1155.5	1163.0	1164.1
12.5°	1140.6	1142.7	1143.8	1151.3	1152.3
15°	1122.5	1125.7	1127.8	1137.4	1139.5
17.5°	1102.2	1105.4	1110.8	1121.4	1123.6
20°	1077.7	1082.0	1088.4	1102.2	1105.4
22.5°	1051.1	1055.3	1066.0	1078.8	1084.1
25°	1020.2	1028.7	1039.3	1056.4	1059.6
27.5°	989.2	996.7	1010.6	1028.7	1032.9
30°	953.0	964.7	981.8	999.9	1004.2
32.5°	917.8	929.5	949.8	969.0	974.3
35°	881.6	892.2	913.6	935.9	942.3
37.5°	840.0	853.9	877.3	899.7	906.1
40°	796.3	813.4	840.0	863.5	870.9
42.5°	754.7	772.8	799.5	825.1	833.6
45°	711.0	728.1	760.1	788.8	795.2
47.5°	666.2	685.4	719.5	748.3	759.0
50°	621.5	641.7	678.0	707.8	714.2
52.5°	576.7	598.0	636.4	668.4	671.6
55°	529.8	553.2	593.8	624.7	631.1
57.5°	487.2	507.4	551.1	583.1	590.6
60°	440.3	462.6	509.5	539.4	549.0
62.5°	395.5	418.9	468.0	497.8	506.3
65°	348.6	375.2	423.2	458.4	466.9
67.5°	308.1	333.7	384.8	418.9	427.5
70°	261.2	289.9	344.3	379.5	388.0
72.5°	220.7	250.5	304.9	339.0	351.8
75°	177.0	211.1	265.4	301.7	310.2
77.5°	134.3	173.8	229.2	256.9	256.9
80°	95.9	137.5	188.7	201.5	203.6
82.5°	62.9	103.4	139.6	138.6	138.6
85°	36.2	67.2	83.1	81.0	81.0
87.5°	13.9	27.7	29.8	29.8	28.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)