

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: P310100

Luminaire Tested: **24FCZ2-45HE-UNV-L82765-RDP-CA125-W2A-U-5500K**

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: P310100  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: 24FCZ2-45HE-UNV-L82765-RDP-CA125-W2A-U-5500K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" ACRYLIC SHEET  
Light Source: (336) 5500K 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: 2858.0 lumens  
Efficiency: N/A  
Efficacy: 82.4 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

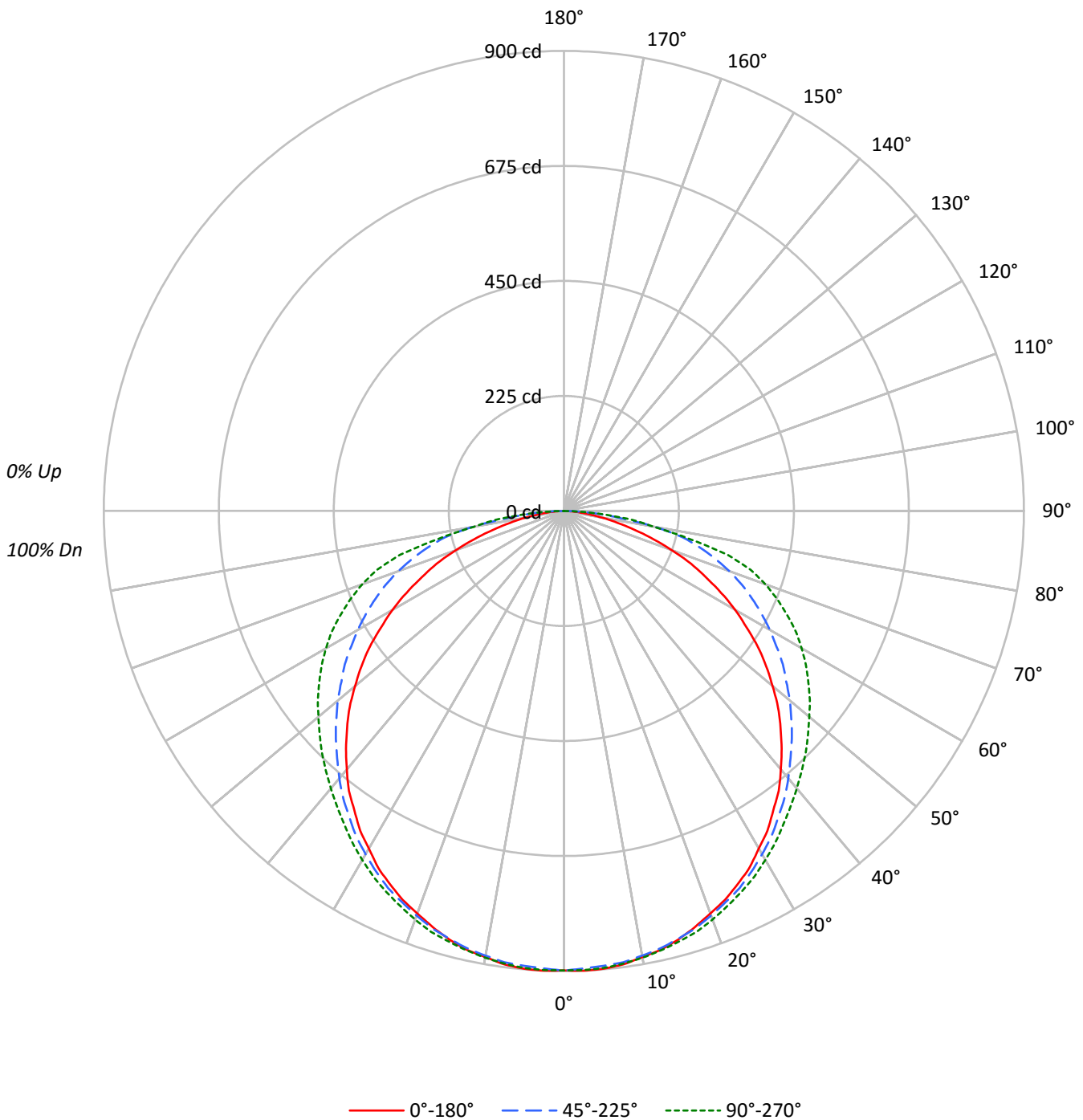
Input Watts (W): 34.7  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	98	94	105	100	96	92	96	93	89	92	89	87	88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67
3	88	77	68	62	86	76	67	61	72	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	1209	1209	1209
5°	1214	1206	1212
10°	1210	1207	1212
15°	1209	1207	1214
20°	1200	1206	1218
25°	1195	1208	1221
30°	1185	1205	1225
35°	1174	1202	1229
40°	1160	1200	1245
45°	1141	1200	1273
50°	1116	1208	1312
55°	1088	1227	1370
60°	1041	1251	1446
65°	975	1295	1535
70°	887	1355	1651
75°	752	1430	1724
80°	594	1439	1395
85°	438	1095	1226



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	85.3	3.0
10°-20°	245.4	8.6
20°-30°	375.2	13.1
30°-40°	458.7	16.0
40°-50°	488.9	17.1
50°-60°	467.4	16.4
60°-70°	396.0	13.9
70°-80°	266.1	9.3
80°-90°	75.1	2.6
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°	705.8	24.7
0°-40°	1164.5	40.7
0°-60°	2120.8	74.2
0°-90°	2858.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2858.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	899	899	899	899	899	
5°	899	897	893	897	897	85
15°	868	868	866	873	872	245
25°	805	808	814	821	822	371
35°	714	720	732	746	748	448
45°	600	610	631	658	669	462
55°	464	481	523	564	584	413
65°	306	337	407	461	482	304
75°	145	197	275	322	332	155
85°	28	58	71	77	79	35
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	898.8	898.8	898.8	898.8	898.8
2.5°	900.2	900.2	895.9	898.8	898.8
5°	898.8	897.3	893.1	897.3	897.3
7.5°	894.5	893.1	890.3	894.5	893.1
10°	886.0	886.0	883.2	887.4	887.4
12.5°	878.9	877.5	876.1	881.7	880.3
15°	867.6	867.6	866.2	873.2	871.8
17.5°	853.4	854.8	856.2	861.9	863.3
20°	837.8	840.6	842.1	850.6	850.6
22.5°	823.6	825.0	827.9	836.4	836.4
25°	805.2	808.0	813.7	820.8	822.2
27.5°	786.8	788.2	795.3	805.2	806.6
30°	762.7	766.9	775.4	786.8	788.2
32.5°	741.4	745.7	755.6	766.9	769.8
35°	714.5	720.1	731.5	745.7	748.5
37.5°	690.4	694.6	708.8	724.4	728.6
40°	660.6	669.1	683.3	701.7	708.8
42.5°	630.8	639.3	656.3	680.4	689.0
45°	599.6	609.6	630.8	657.8	669.1
47.5°	568.5	579.8	603.9	635.1	647.8
50°	533.0	547.2	577.0	612.4	626.6
52.5°	499.0	516.0	548.6	588.3	606.7
55°	463.6	480.6	523.1	564.2	584.1
57.5°	423.9	446.5	493.3	540.1	561.4
60°	387.0	408.3	465.0	516.0	537.3
62.5°	347.3	375.7	436.6	490.5	511.8
65°	306.2	337.4	406.9	460.7	482.0
67.5°	269.3	303.4	377.1	431.0	452.2
70°	225.4	267.9	344.5	398.3	419.6
72.5°	184.3	231.1	310.5	362.9	382.8
75°	144.6	197.0	275.0	321.8	331.7
77.5°	107.7	163.0	238.2	258.0	250.9
80°	76.6	130.4	185.7	175.8	180.0
82.5°	49.6	99.2	114.8	130.4	134.7
85°	28.4	58.1	70.9	76.6	79.4
87.5°	12.8	21.3	28.4	28.4	26.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)