

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: P310111

Luminaire Tested: **24FCZ2-45HE-UNV-L82765-RDP-CP125-W2A-U-6500K**

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: P310111  
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-CP125-W2A-U-6500K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" POLYCARB SHEET  
Light Source: (336) 6500K 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**

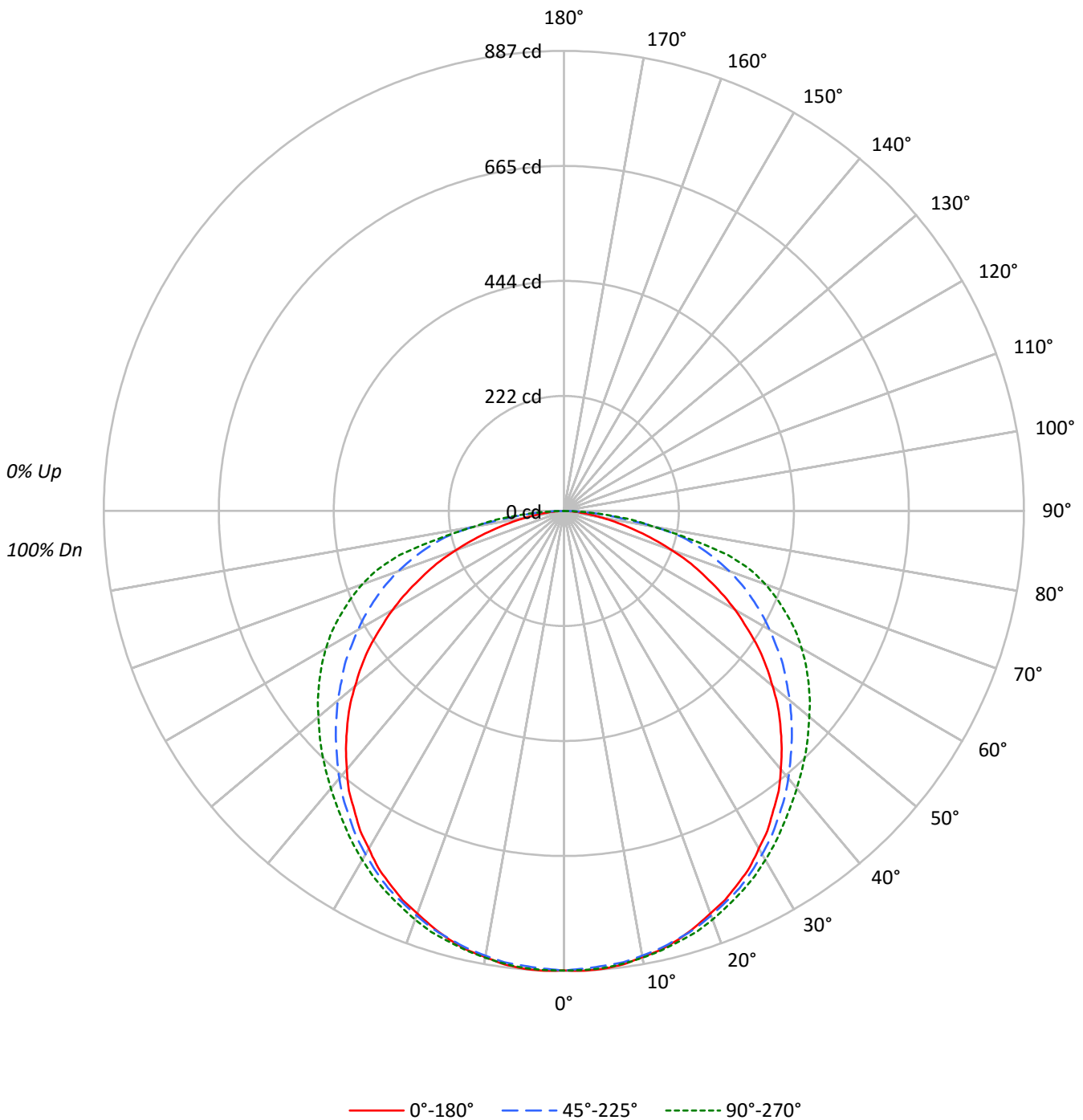
Lumens per Lamp: N/A  
Luminaire Lumens: 2817.0 lumens  
Efficiency: N/A  
Efficacy: 79.8 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 35.3  
Input Voltage (V): NR  
Input Current (A<sub>in</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°	1192	1192	1192
5°	1197	1189	1195
10°	1193	1189	1195
15°	1191	1189	1197
20°	1182	1188	1200
25°	1178	1191	1203
30°	1168	1187	1207
35°	1157	1184	1212
40°	1144	1183	1227
45°	1125	1183	1255
50°	1100	1190	1293
55°	1072	1209	1350
60°	1027	1233	1425
65°	961	1277	1513
70°	874	1336	1627
75°	741	1409	1700
80°	585	1418	1375
85°	431	1079	1207



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	84.0	3.0
10°-20°	241.8	8.6
20°-30°	369.8	13.1
30°-40°	452.1	16.0
40°-50°	481.9	17.1
50°-60°	460.7	16.4
60°-70°	390.3	13.9
70°-80°	262.3	9.3
80°-90°	74.0	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°	695.7	24.7
0°-40°	1147.8	40.7
0°-60°	2090.4	74.2
0°-90°	2817.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2817.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	886	886	886	886	886	
5°	886	884	880	884	884	84
15°	855	855	854	861	859	241
25°	794	796	802	809	810	366
35°	704	710	721	735	738	441
45°	591	601	622	648	660	456
55°	457	474	516	556	576	407
65°	302	332	401	454	475	300
75°	142	194	271	317	327	153
85°	28	57	70	76	78	35
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	885.9	885.9	885.9	885.9	885.9
2.5°	887.3	887.3	883.1	885.9	885.9
5°	885.9	884.5	880.3	884.5	884.5
7.5°	881.7	880.3	877.5	881.7	880.3
10°	873.3	873.3	870.5	874.7	874.7
12.5°	866.3	864.9	863.5	869.1	867.7
15°	855.1	855.1	853.7	860.7	859.3
17.5°	841.2	842.6	843.9	849.5	850.9
20°	825.8	828.6	830.0	838.4	838.4
22.5°	811.8	813.2	816.0	824.4	824.4
25°	793.6	796.4	802.0	809.0	810.4
27.5°	775.5	776.9	783.9	793.6	795.0
30°	751.7	755.9	764.3	775.5	776.9
32.5°	730.8	735.0	744.7	755.9	758.7
35°	704.2	709.8	721.0	735.0	737.8
37.5°	680.5	684.7	698.6	714.0	718.2
40°	651.1	659.5	673.5	691.6	698.6
42.5°	621.8	630.2	646.9	670.7	679.1
45°	591.0	600.8	621.8	648.3	659.5
47.5°	560.3	571.5	595.2	626.0	638.6
50°	525.4	539.3	568.7	603.6	617.6
52.5°	491.8	508.6	540.7	579.9	598.0
55°	456.9	473.7	515.6	556.1	575.7
57.5°	417.8	440.1	486.2	532.4	553.3
60°	381.5	402.4	458.3	508.6	529.6
62.5°	342.3	370.3	430.4	483.5	504.4
65°	301.8	332.5	401.0	454.1	475.1
67.5°	265.5	299.0	371.7	424.8	445.7
70°	222.2	264.1	339.5	392.6	413.6
72.5°	181.6	227.8	306.0	357.7	377.3
75°	142.5	194.2	271.1	317.2	327.0
77.5°	106.2	160.7	234.7	254.3	247.3
80°	75.5	128.5	183.0	173.3	177.5
82.5°	48.9	97.8	113.2	128.5	132.7
85°	27.9	57.3	69.9	75.5	78.2
87.5°	12.6	21.0	27.9	27.9	26.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)