

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: P313572

Luminaire Tested: **24FCZ2-45HE-UNV-L83050-RDP-CA125-W2A-U-4000K**

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: P313572
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-L83050-RDP-CA125-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" ACRYLIC SHEET
Light Source: (336) 4000K 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: 2885.0 lumens
Efficiency: N/A
Efficacy: 83.4 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

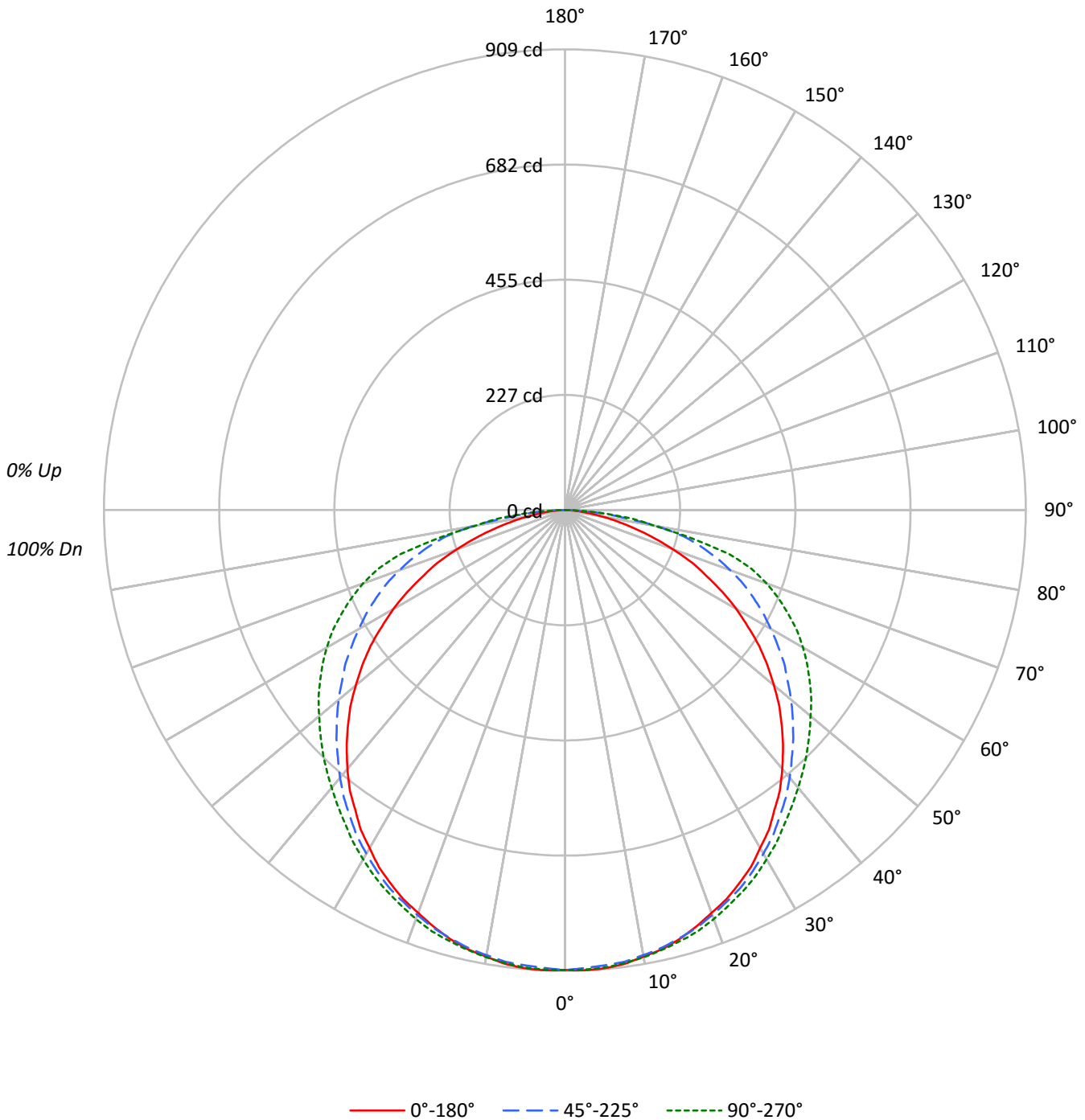
Input Watts (W): 34.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1221	1221	1221
5°	1225	1218	1223
10°	1222	1218	1224
15°	1220	1218	1226
20°	1211	1217	1229
25°	1207	1219	1232
30°	1196	1216	1236
35°	1185	1213	1241
40°	1171	1211	1257
45°	1152	1212	1285
50°	1126	1219	1324
55°	1098	1239	1383
60°	1051	1263	1459
65°	984	1308	1549
70°	895	1368	1666
75°	759	1443	1741
80°	599	1453	1408
85°	442	1104	1237



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	86.1	3.0
10°-20°	247.7	8.6
20°-30°	378.8	13.1
30°-40°	463.0	16.0
40°-50°	493.5	17.1
50°-60°	471.9	16.4
60°-70°	399.7	13.9
70°-80°	268.6	9.3
80°-90°	75.8	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°	712.5	24.7
0°-40°	1175.5	40.7
0°-60°	2140.9	74.2
0°-90°	2885.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2885.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	907	907	907	907	907	
5°	907	906	902	906	906	86
15°	876	876	874	882	880	247
25°	813	816	821	828	830	375
35°	721	727	738	753	756	452
45°	605	615	637	664	675	467
55°	468	485	528	570	590	417
65°	309	341	411	465	486	307
75°	146	199	278	325	335	156
85°	29	59	72	77	80	35
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	907.3	907.3	907.3	907.3	907.3
2.5°	908.7	908.7	904.4	907.3	907.3
5°	907.3	905.8	901.5	905.8	905.8
7.5°	903.0	901.5	898.7	903.0	901.5
10°	894.4	894.4	891.5	895.8	895.8
12.5°	887.2	885.8	884.4	890.1	888.6
15°	875.8	875.8	874.3	881.5	880.1
17.5°	861.5	862.9	864.3	870.0	871.5
20°	845.7	848.6	850.0	858.6	858.6
22.5°	831.4	832.8	835.7	844.3	844.3
25°	812.8	815.7	821.4	828.5	830.0
27.5°	794.2	795.6	802.8	812.8	814.2
30°	769.9	774.2	782.8	794.2	795.6
32.5°	748.4	752.7	762.7	774.2	777.0
35°	721.2	726.9	738.4	752.7	755.6
37.5°	696.9	701.2	715.5	731.2	735.5
40°	666.8	675.4	689.7	708.3	715.5
42.5°	636.8	645.4	662.6	686.9	695.5
45°	605.3	615.3	636.8	664.0	675.4
47.5°	573.8	585.3	609.6	641.1	654.0
50°	538.1	552.4	582.4	618.2	632.5
52.5°	503.7	520.9	553.8	593.9	612.5
55°	467.9	485.1	528.0	569.5	589.6
57.5°	427.9	450.8	498.0	545.2	566.7
60°	390.7	412.1	469.4	520.9	542.3
62.5°	350.6	379.2	440.7	495.1	516.6
65°	309.1	340.6	410.7	465.1	486.5
67.5°	271.9	306.2	380.6	435.0	456.5
70°	227.5	270.5	347.7	402.1	423.6
72.5°	186.0	233.3	313.4	366.3	386.4
75°	146.0	198.9	277.6	324.8	334.9
77.5°	108.8	164.6	240.4	260.4	253.3
80°	77.3	131.7	187.5	177.4	181.7
82.5°	50.1	100.2	115.9	131.7	135.9
85°	28.6	58.7	71.5	77.3	80.1
87.5°	12.9	21.5	28.6	28.6	27.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)