

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: P309428

Luminaire Tested: **24FCZ2-45HE-UNV-L82765-HRP-CP125-W2A-U-2700K**

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: P309428
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-20)
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-HRP-CP125-W2A-U-2700K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125"
POLYCARB SHEET
Light Source: (336) 2700K 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: 2788.0 lumens
Efficiency: N/A
Efficacy: 82.5 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

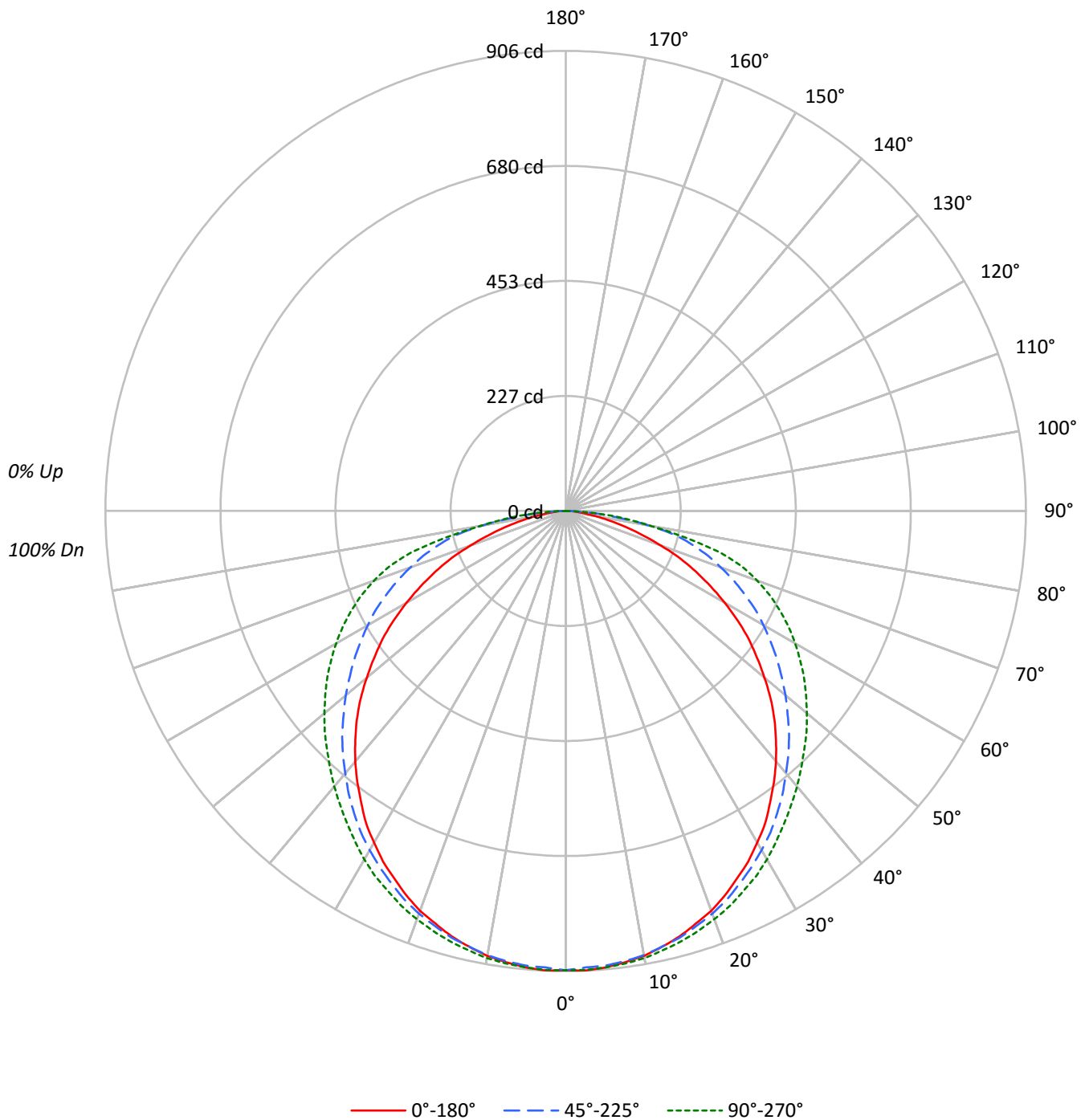
Input Watts (W): 33.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				0
RW	70	50	30	10	70	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		100
1	108	103	98	94	105	101	96	93	96	93	90		92	90	87		82
2	98	89	82	76	95	87	80	75	83	78	73		80	75	71		67
3	89	78	69	62	86	76	68	62	73	66	61		70	64	59		56
4	81	68	59	52	79	67	59	52	65	57	51		62	56	50		48
5	74	61	52	45	72	60	51	45	58	50	44		56	49	44		41
6	69	55	46	39	67	54	45	39	52	44	38		50	43	38		36
7	63	50	41	34	62	49	40	34	47	39	34		46	39	34		31
8	59	45	36	30	57	44	36	30	43	36	30		42	35	30		28
9	55	41	33	27	54	41	33	27	40	32	27		39	32	27		25
10	52	38	30	25	50	38	30	25	37	30	25		36	29	24		23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1217	1217	1217
5°	1219	1214	1219
10°	1215	1213	1222
15°	1208	1211	1223
20°	1200	1208	1225
25°	1185	1203	1227
30°	1171	1199	1231
35°	1152	1192	1233
40°	1132	1185	1244
45°	1106	1184	1264
50°	1070	1182	1297
55°	1032	1191	1344
60°	974	1209	1404
65°	899	1238	1483
70°	785	1281	1579
75°	637	1347	1632
80°	470	1320	1320
85°	360	973	1099



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	85.7	3.1
10°-20°	246.1	8.8
20°-30°	374.6	13.4
30°-40°	454.9	16.3
40°-50°	480.6	17.2
50°-60°	453.5	16.3
60°-70°	377.0	13.5
70°-80°	248.1	8.9
80°-90°	67.6	2.4
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°	706.4	25.3
0°-40°	1161.2	41.7
0°-60°	2095.3	75.2
0°-90°	2788.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2788.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	905	905	905	905	905	
5°	902	902	899	902	902	86
15°	867	868	870	878	878	245
25°	798	803	810	824	826	368
35°	702	710	726	745	750	439
45°	581	593	622	652	664	448
55°	440	459	508	556	573	392
65°	282	315	389	446	466	279
75°	123	179	259	307	314	132
85°	23	51	63	70	71	29
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	904.6	904.6	904.6	904.6	904.6
2.5°	905.7	904.6	899.9	904.6	904.6
5°	902.2	902.2	898.7	902.2	902.2
7.5°	896.4	896.4	894.1	898.7	898.7
10°	889.4	889.4	888.2	894.1	894.1
12.5°	878.9	880.1	878.9	885.9	885.9
15°	867.2	868.4	869.6	877.7	877.7
17.5°	852.0	854.4	856.7	866.1	867.2
20°	838.0	839.2	843.9	854.4	855.5
22.5°	819.4	822.9	828.7	839.2	842.7
25°	798.4	803.0	810.0	824.0	826.4
27.5°	778.5	782.0	791.4	806.5	811.2
30°	754.0	759.8	771.5	786.7	792.5
32.5°	730.7	736.5	750.5	766.8	771.5
35°	701.5	709.6	726.0	744.7	750.5
37.5°	673.5	681.6	701.5	722.5	729.5
40°	644.3	653.6	674.6	699.1	708.5
42.5°	612.8	625.6	649.0	675.8	686.3
45°	581.3	592.9	622.1	652.5	664.1
47.5°	547.4	561.4	592.9	629.1	643.1
50°	511.2	528.7	564.9	604.6	619.8
52.5°	475.0	494.9	535.7	580.1	596.4
55°	440.0	458.7	507.7	555.6	573.1
57.5°	401.5	424.9	478.5	529.9	547.4
60°	361.8	387.5	449.4	503.1	521.7
62.5°	322.1	351.3	421.4	475.0	494.9
65°	282.5	315.1	388.7	445.9	465.7
67.5°	243.9	280.1	358.3	415.5	435.4
70°	199.6	245.1	325.6	381.7	401.5
72.5°	158.7	211.3	294.1	346.7	364.2
75°	122.6	178.6	259.1	307.0	314.0
77.5°	89.9	145.9	222.9	239.3	240.4
80°	60.7	116.7	170.4	168.1	170.4
82.5°	39.7	87.5	107.4	120.2	121.4
85°	23.3	51.4	63.0	70.0	71.2
87.5°	11.7	17.5	22.2	23.3	25.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)