

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: P309425

Luminaire Tested: **24FCZ2-45HE-UNV-L82765-HRP-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: P309425
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-CA125-W2A-U-5500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 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: 3223.0 lumens
Efficiency: N/A
Efficacy: 92.9 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

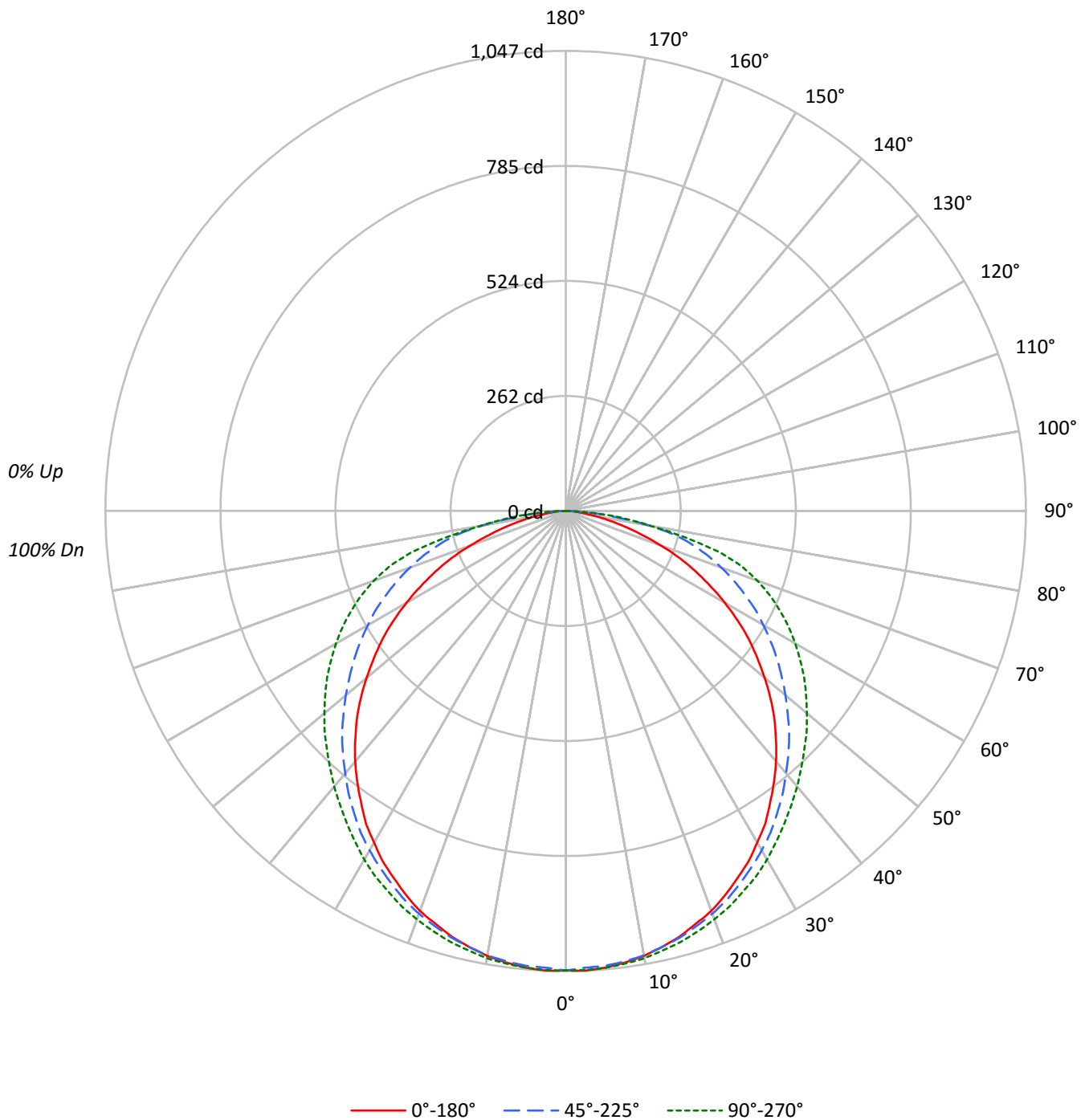
Input Watts (W): 34.7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	50	30	10	50	30	10
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	101	96	93	96	93	90	92	90	87	89	86	84	82		
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67		
3	89	78	69	62	86	76	68	62	73	66	61	70	64	59	68	63	58	56		
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	50	48		
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41		
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36		
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31		
8	59	45	36	30	57	44	36	30	43	36	30	42	35	30	41	34	30	28		
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25		
10	52	38	30	25	50	38	30	25	37	30	25	36	29	24	35	29	24	23		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1407	1407	1407
5°	1409	1403	1409
10°	1405	1403	1412
15°	1396	1400	1413
20°	1387	1397	1416
25°	1370	1390	1418
30°	1354	1386	1423
35°	1332	1379	1425
40°	1308	1370	1439
45°	1278	1369	1461
50°	1237	1367	1500
55°	1193	1377	1554
60°	1126	1398	1623
65°	1039	1430	1714
70°	908	1481	1826
75°	737	1557	1887
80°	544	1526	1526
85°	417	1125	1271



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	99.1	3.1
10°-20°	284.5	8.8
20°-30°	433.1	13.4
30°-40°	525.8	16.3
40°-50°	555.5	17.2
50°-60°	524.2	16.3
60°-70°	435.9	13.5
70°-80°	286.8	8.9
80°-90°	78.2	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°	816.6	25.3
0°-40°	1342.4	41.7
0°-60°	2422.2	75.2
0°-90°	3223.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3223.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1046	1046	1046	1046	1046	
5°	1043	1043	1039	1043	1043	99
15°	1002	1004	1005	1015	1015	283
25°	923	928	936	953	955	426
35°	811	820	839	861	868	508
45°	672	685	719	754	768	517
55°	509	530	587	642	662	453
65°	326	364	449	515	538	323
75°	142	206	300	355	363	153
85°	27	59	73	81	82	33
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1045.7	1045.7	1045.7	1045.7	1045.7
2.5°	1047.1	1045.7	1040.3	1045.7	1045.7
5°	1043.0	1043.0	1039.0	1043.0	1043.0
7.5°	1036.3	1036.3	1033.6	1039.0	1039.0
10°	1028.2	1028.2	1026.8	1033.6	1033.6
12.5°	1016.0	1017.4	1016.0	1024.1	1024.1
15°	1002.5	1003.9	1005.2	1014.7	1014.7
17.5°	985.0	987.7	990.4	1001.2	1002.5
20°	968.8	970.1	975.5	987.7	989.0
22.5°	947.2	951.3	958.0	970.1	974.2
25°	922.9	928.3	936.4	952.6	955.3
27.5°	900.0	904.0	914.8	932.4	937.8
30°	871.6	878.4	891.9	909.4	916.2
32.5°	844.7	851.4	867.6	886.5	891.9
35°	810.9	820.4	839.3	860.9	867.6
37.5°	778.5	788.0	810.9	835.2	843.3
40°	744.8	755.6	779.9	808.2	819.0
42.5°	708.4	723.2	750.2	781.2	793.4
45°	671.9	685.4	719.2	754.3	767.7
47.5°	632.8	649.0	685.4	727.3	743.5
50°	591.0	611.2	653.1	698.9	716.5
52.5°	549.2	572.1	619.3	670.6	689.5
55°	508.7	530.3	586.9	642.3	662.5
57.5°	464.2	491.1	553.2	612.6	632.8
60°	418.3	448.0	519.5	581.5	603.1
62.5°	372.4	406.1	487.1	549.2	572.1
65°	326.5	364.3	449.3	515.4	538.4
67.5°	282.0	323.8	414.2	480.3	503.3
70°	230.7	283.4	376.5	441.2	464.2
72.5°	183.5	244.2	340.0	400.7	421.0
75°	141.7	206.4	299.5	354.9	363.0
77.5°	103.9	168.7	257.7	276.6	278.0
80°	70.2	134.9	197.0	194.3	197.0
82.5°	45.9	101.2	124.1	139.0	140.3
85°	27.0	59.4	72.9	81.0	82.3
87.5°	13.5	20.2	25.6	27.0	29.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)