

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: P313202

Luminaire Tested: **24FCZ2-45HE-UNV-L83050-HRP-CP125-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: P313202
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-L83050-HRP-CP125-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" POLYCARB 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: 3268.0 lumens
Efficiency: N/A
Efficacy: 94.5 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

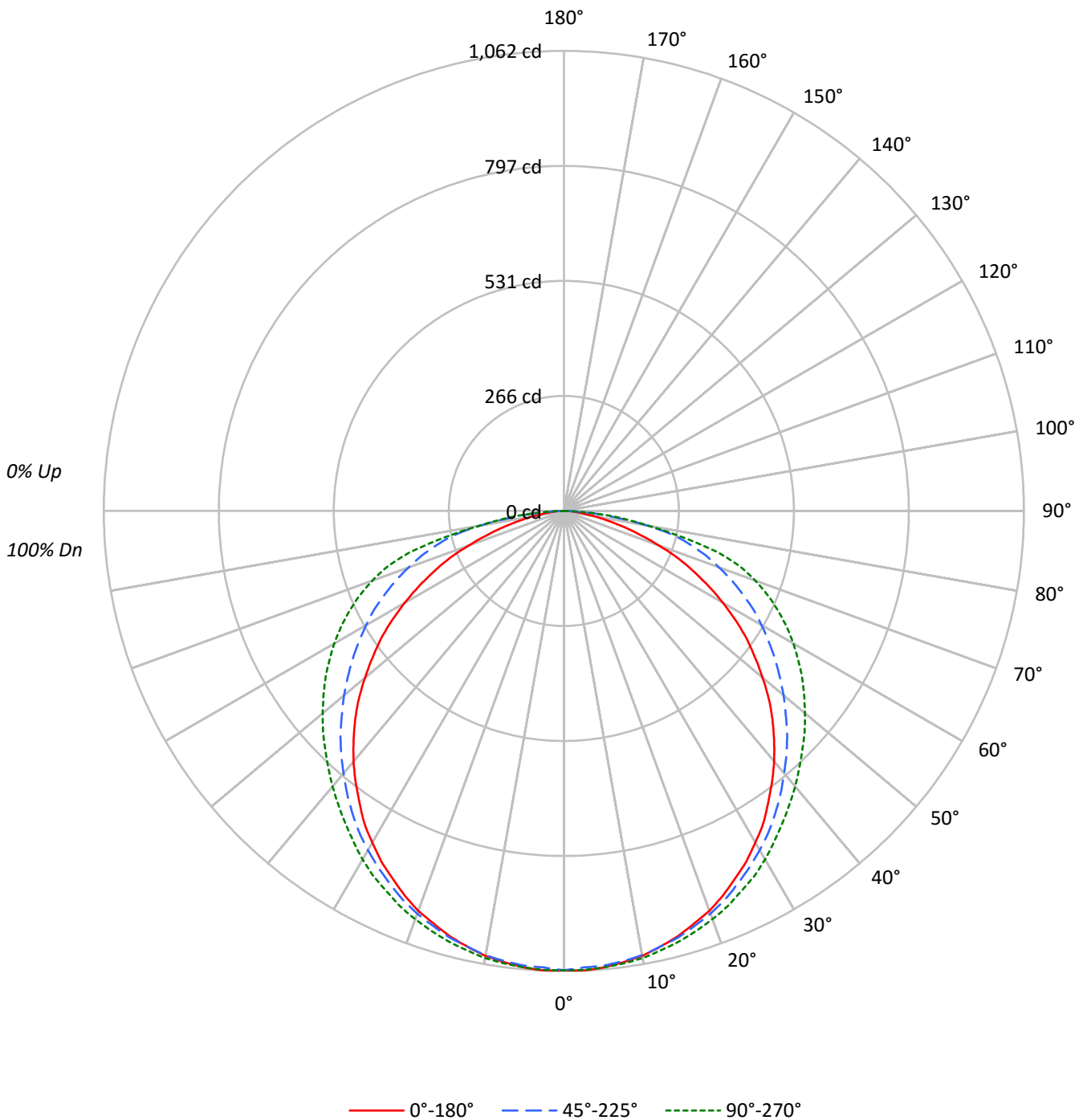
Input Watts (W): 34.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1427	1427	1427
5°	1428	1423	1428
10°	1424	1423	1432
15°	1416	1420	1433
20°	1406	1416	1436
25°	1389	1410	1438
30°	1373	1405	1443
35°	1350	1398	1445
40°	1326	1389	1459
45°	1296	1388	1481
50°	1254	1386	1521
55°	1210	1396	1576
60°	1141	1417	1646
65°	1054	1450	1738
70°	921	1502	1851
75°	747	1579	1913
80°	551	1547	1547
85°	423	1141	1289



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	100.4	3.1
10°-20°	288.4	8.8
20°-30°	439.1	13.4
30°-40°	533.2	16.3
40°-50°	563.3	17.2
50°-60°	531.5	16.3
60°-70°	442.0	13.5
70°-80°	290.8	8.9
80°-90°	79.3	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°	828.0	25.3
0°-40°	1361.2	41.7
0°-60°	2456.0	75.2
0°-90°	3268.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3268.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1060	1060	1060	1060	1060	
5°	1058	1058	1054	1058	1058	100
15°	1016	1018	1019	1029	1029	287
25°	936	941	950	966	969	432
35°	822	832	851	873	880	515
45°	681	695	729	765	778	525
55°	516	538	595	651	672	459
65°	331	369	456	523	546	327
75°	144	209	304	360	368	155
85°	27	60	74	82	84	33
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1060.3	1060.3	1060.3	1060.3	1060.3
2.5°	1061.7	1060.3	1054.8	1060.3	1060.3
5°	1057.6	1057.6	1053.5	1057.6	1057.6
7.5°	1050.7	1050.7	1048.0	1053.5	1053.5
10°	1042.5	1042.5	1041.2	1048.0	1048.0
12.5°	1030.2	1031.6	1030.2	1038.4	1038.4
15°	1016.5	1017.9	1019.3	1028.8	1028.8
17.5°	998.7	1001.5	1004.2	1015.2	1016.5
20°	982.3	983.7	989.2	1001.5	1002.8
22.5°	960.4	964.5	971.4	983.7	987.8
25°	935.8	941.3	949.5	965.9	968.6
27.5°	912.5	916.7	927.6	945.4	950.9
30°	883.8	890.7	904.3	922.1	929.0
32.5°	856.5	863.3	879.7	898.9	904.3
35°	822.2	831.8	851.0	872.9	879.7
37.5°	789.4	799.0	822.2	846.9	855.1
40°	755.2	766.2	790.8	819.5	830.5
42.5°	718.3	733.3	760.7	792.2	804.5
45°	681.3	695.0	729.2	764.8	778.5
47.5°	641.7	658.1	695.0	737.4	753.8
50°	599.2	619.8	662.2	708.7	726.5
52.5°	556.8	580.1	628.0	680.0	699.1
55°	515.8	537.7	595.1	651.2	671.8
57.5°	470.6	498.0	560.9	621.1	641.7
60°	424.1	454.2	526.7	589.7	611.6
62.5°	377.6	411.8	493.9	556.8	580.1
65°	331.1	369.4	455.6	522.6	545.9
67.5°	285.9	328.4	420.0	487.1	510.3
70°	234.0	287.3	381.7	447.4	470.6
72.5°	186.1	247.6	344.8	406.3	426.9
75°	143.7	209.3	303.7	359.8	368.0
77.5°	105.3	171.0	261.3	280.5	281.8
80°	71.1	136.8	199.7	197.0	199.7
82.5°	46.5	102.6	125.9	140.9	142.3
85°	27.4	60.2	73.9	82.1	83.5
87.5°	13.7	20.5	26.0	27.4	30.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)