

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: P309424

Luminaire Tested: **24FCZ2-45HE-UNV-L82765-HRP-CA125-W2A-U-5000K**

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: P309424
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-5000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" ACRYLIC SHEET
Light Source: (336) 5000K 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: 3191.0 lumens
Efficiency: N/A
Efficacy: 92.2 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

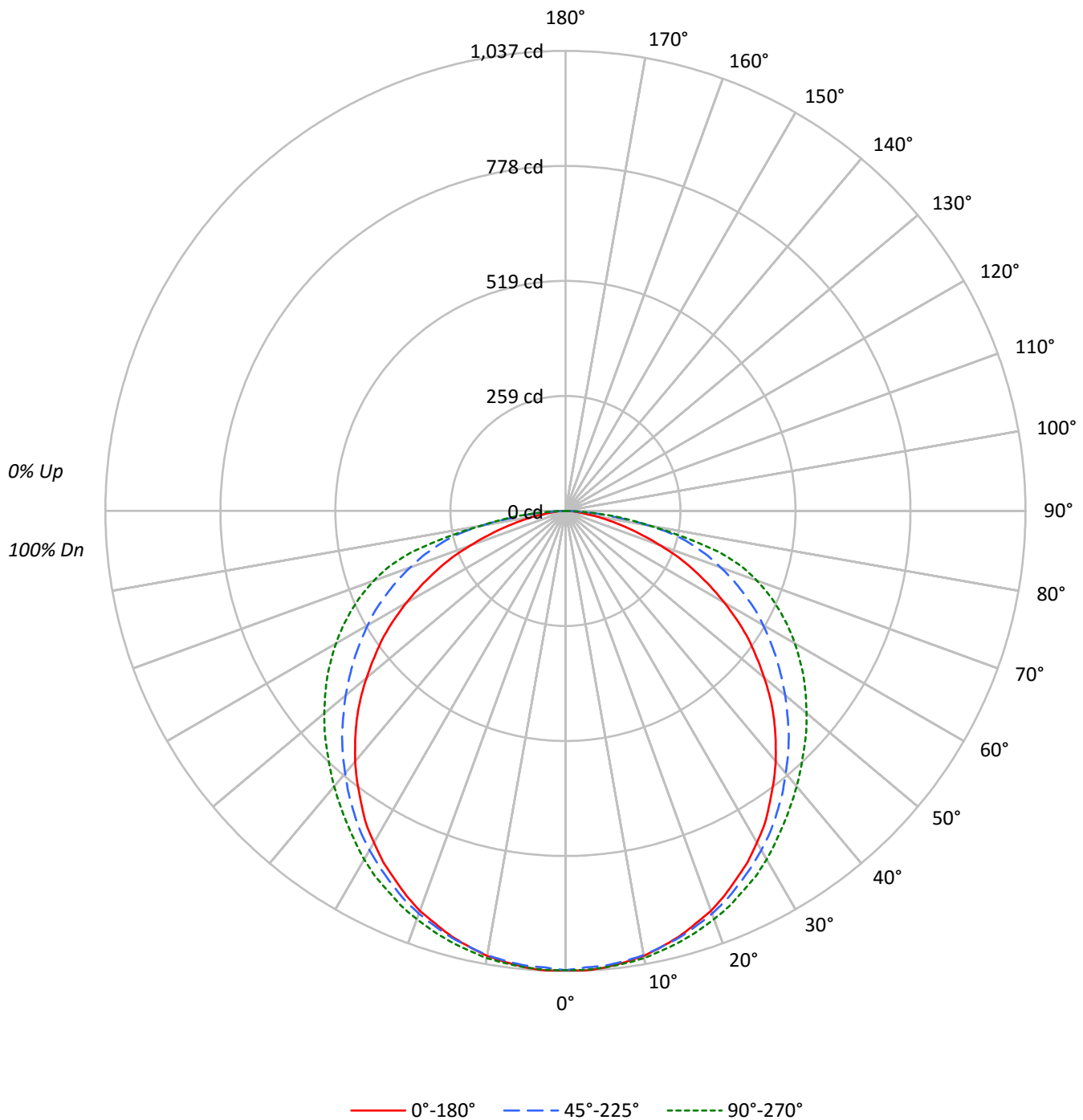
Input Watts (W): 34.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				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°	1393	1393	1393
5°	1395	1389	1395
10°	1391	1389	1398
15°	1383	1386	1399
20°	1373	1383	1402
25°	1357	1376	1404
30°	1341	1372	1409
35°	1319	1365	1411
40°	1295	1356	1424
45°	1266	1355	1446
50°	1225	1353	1485
55°	1181	1363	1539
60°	1114	1384	1607
65°	1029	1416	1697
70°	899	1466	1808
75°	729	1542	1868
80°	539	1511	1511
85°	412	1113	1258



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	98.1	3.1
10°-20°	281.6	8.8
20°-30°	428.8	13.4
30°-40°	520.6	16.3
40°-50°	550.0	17.2
50°-60°	519.0	16.3
60°-70°	431.5	13.5
70°-80°	283.9	8.9
80°-90°	77.4	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°	808.5	25.3
0°-40°	1329.1	41.7
0°-60°	2398.2	75.2
0°-90°	3191.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3191.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1035	1035	1035	1035	1035	
5°	1033	1033	1029	1033	1033	98
15°	993	994	995	1005	1005	280
25°	914	919	927	943	946	422
35°	803	812	831	852	859	503
45°	665	679	712	747	760	512
55°	504	525	581	636	656	449
65°	323	361	445	510	533	320
75°	140	204	297	351	359	151
85°	27	59	72	80	82	33
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1035.3	1035.3	1035.3	1035.3	1035.3
2.5°	1036.7	1035.3	1030.0	1035.3	1035.3
5°	1032.7	1032.7	1028.6	1032.7	1032.7
7.5°	1026.0	1026.0	1023.3	1028.6	1028.6
10°	1018.0	1018.0	1016.6	1023.3	1023.3
12.5°	1005.9	1007.3	1005.9	1013.9	1013.9
15°	992.6	993.9	995.2	1004.6	1004.6
17.5°	975.2	977.9	980.6	991.2	992.6
20°	959.2	960.5	965.9	977.9	979.2
22.5°	937.8	941.8	948.5	960.5	964.5
25°	913.8	919.1	927.1	943.1	945.8
27.5°	891.0	895.1	905.7	923.1	928.5
30°	863.0	869.7	883.0	900.4	907.1
32.5°	836.3	843.0	859.0	877.7	883.0
35°	802.9	812.2	830.9	852.3	859.0
37.5°	770.8	780.2	802.9	826.9	834.9
40°	737.4	748.1	772.2	800.2	810.9
42.5°	701.3	716.0	742.8	773.5	785.5
45°	665.3	678.6	712.0	746.8	760.1
47.5°	626.5	642.6	678.6	720.1	736.1
50°	585.1	605.2	646.6	692.0	709.4
52.5°	543.7	566.4	613.2	663.9	682.6
55°	503.6	525.0	581.1	635.9	655.9
57.5°	459.5	486.3	547.7	606.5	626.5
60°	414.1	443.5	514.3	575.8	597.1
62.5°	368.7	402.1	482.3	543.7	566.4
65°	323.3	360.7	444.9	510.3	533.0
67.5°	279.2	320.6	410.1	475.6	498.3
70°	228.4	280.5	372.7	436.8	459.5
72.5°	181.7	241.8	336.6	396.8	416.8
75°	140.3	204.4	296.6	351.3	359.4
77.5°	102.9	167.0	255.2	273.9	275.2
80°	69.5	133.6	195.0	192.4	195.0
82.5°	45.4	100.2	122.9	137.6	138.9
85°	26.7	58.8	72.1	80.2	81.5
87.5°	13.4	20.0	25.4	26.7	29.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)