

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: P309435

Luminaire Tested: **24FCZ2-45HE-UNV-L82765-HRP-CP125-W2A-U-5700K**

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: P309435
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-5700K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125"
POLYCARB SHEET
Light Source: (336) 5700K 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: 3169.0 lumens
Efficiency: N/A
Efficacy: 91.3 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

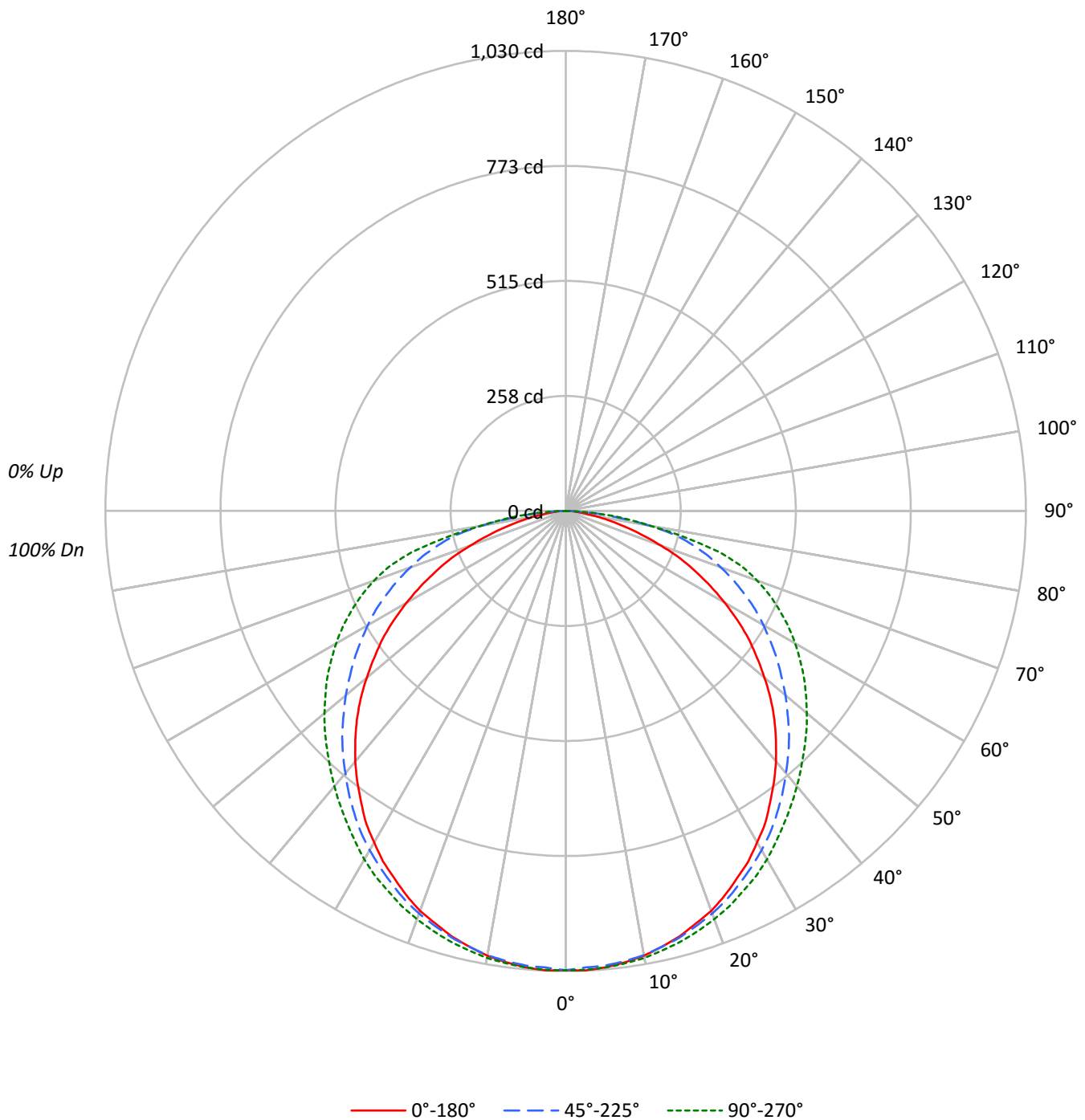
Input Watts (W): 34.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1383	1383	1383
5°	1385	1380	1385
10°	1381	1379	1388
15°	1373	1377	1390
20°	1364	1373	1392
25°	1347	1367	1394
30°	1331	1362	1400
35°	1310	1355	1401
40°	1286	1347	1414
45°	1257	1345	1436
50°	1216	1344	1475
55°	1173	1354	1528
60°	1107	1375	1596
65°	1022	1407	1685
70°	893	1456	1795
75°	724	1531	1855
80°	535	1501	1501
85°	409	1105	1249



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	97.4	3.1
10°-20°	279.7	8.8
20°-30°	425.8	13.4
30°-40°	517.0	16.3
40°-50°	546.2	17.2
50°-60°	515.4	16.3
60°-70°	428.6	13.5
70°-80°	281.9	8.9
80°-90°	76.9	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°	802.9	25.3
0°-40°	1319.9	41.7
0°-60°	2381.6	75.2
0°-90°	3169.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3169.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1028	1028	1028	1028	1028	
5°	1026	1026	1022	1026	1026	97
15°	986	987	988	998	998	278
25°	908	913	921	937	939	419
35°	797	807	825	846	853	499
45°	661	674	707	742	755	509
55°	500	521	577	632	651	446
65°	321	358	442	507	529	317
75°	139	203	294	349	357	150
85°	26	58	72	80	81	32
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1028.2	1028.2	1028.2	1028.2	1028.2
2.5°	1029.5	1028.2	1022.9	1028.2	1028.2
5°	1025.5	1025.5	1021.6	1025.5	1025.5
7.5°	1018.9	1018.9	1016.2	1021.6	1021.6
10°	1010.9	1010.9	1009.6	1016.2	1016.2
12.5°	999.0	1000.3	999.0	1007.0	1007.0
15°	985.7	987.1	988.4	997.7	997.7
17.5°	968.5	971.1	973.8	984.4	985.7
20°	952.6	953.9	959.2	971.1	972.5
22.5°	931.3	935.3	941.9	953.9	957.9
25°	907.5	912.8	920.7	936.6	939.3
27.5°	884.9	888.9	899.5	916.7	922.0
30°	857.0	863.7	876.9	894.2	900.8
32.5°	830.5	837.1	853.1	871.6	876.9
35°	797.3	806.6	825.2	846.4	853.1
37.5°	765.5	774.8	797.3	821.2	829.2
40°	732.3	742.9	766.8	794.7	805.3
42.5°	696.5	711.1	737.6	768.2	780.1
45°	660.7	674.0	707.1	741.6	754.9
47.5°	622.2	638.1	674.0	715.1	731.0
50°	581.1	601.0	642.1	687.2	704.5
52.5°	540.0	562.5	609.0	659.4	677.9
55°	500.2	521.4	577.1	631.5	651.4
57.5°	456.4	482.9	543.9	602.3	622.2
60°	411.3	440.5	510.8	571.8	593.0
62.5°	366.2	399.3	478.9	540.0	562.5
65°	321.1	358.2	441.8	506.8	529.3
67.5°	277.3	318.4	407.3	472.3	494.9
70°	226.9	278.6	370.1	433.8	456.4
72.5°	180.4	240.1	334.3	394.0	413.9
75°	139.3	203.0	294.5	348.9	356.9
77.5°	102.2	165.8	253.4	272.0	273.3
80°	69.0	132.7	193.7	191.0	193.7
82.5°	45.1	99.5	122.1	136.6	138.0
85°	26.5	58.4	71.6	79.6	80.9
87.5°	13.3	19.9	25.2	26.5	29.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)