

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: P313700

Luminaire Tested: **24FCZ2-60HE-UNV-L83050-RDP-CP125-W2A-U-3000K**

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: P313700
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-60HE-UNV-L83050-RDP-CP125-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" POLYCARB SHEET
Light Source: (336) 3000K 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: 3425.0 lumens
Efficiency: N/A
Efficacy: 72.1 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

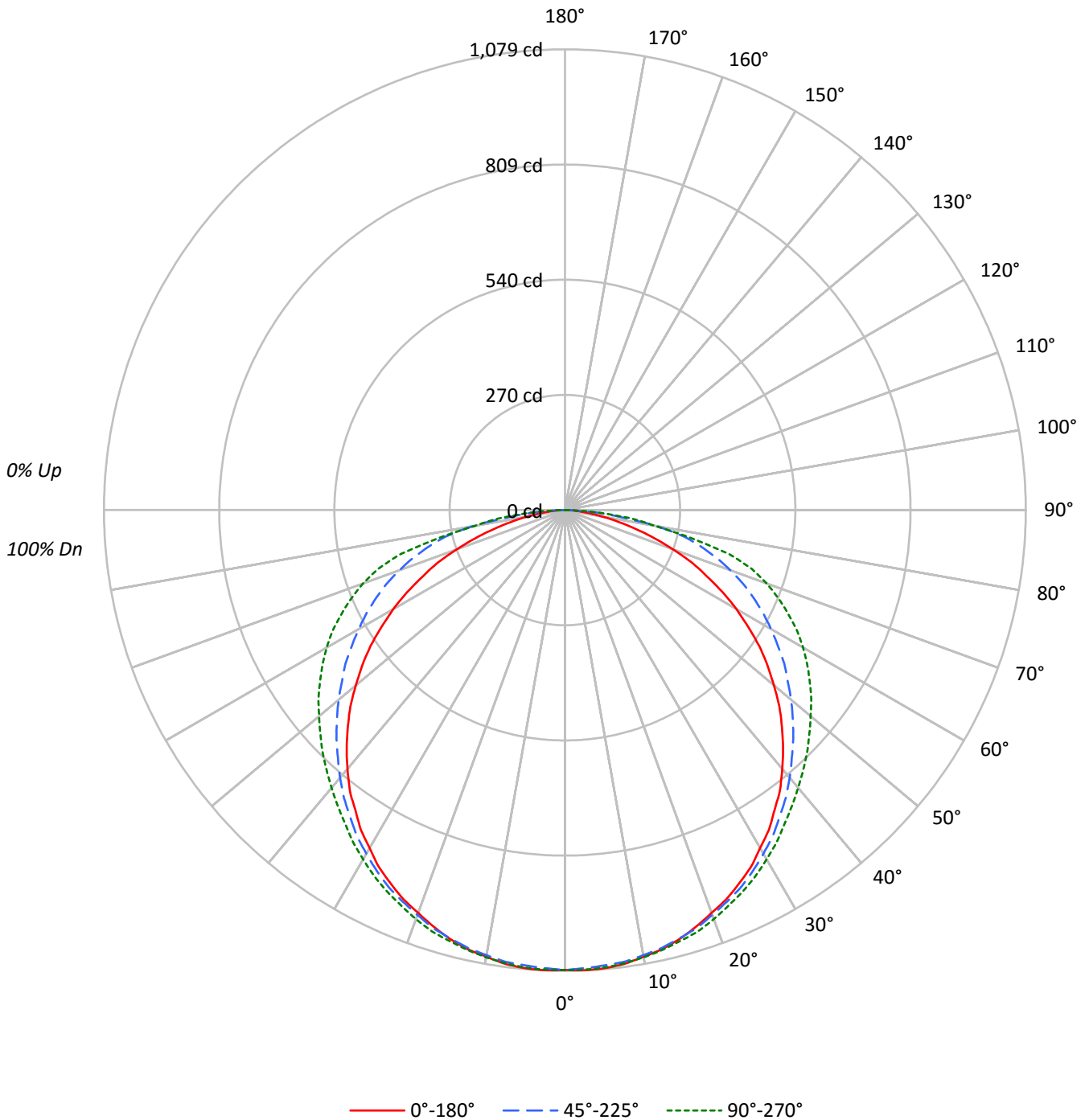
Input Watts (W): 47.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	100	96	92	96	93	89	92	89	87	88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67
3	88	77	68	62	86	76	67	61	72	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1449	1449	1449
5°	1455	1446	1452
10°	1451	1446	1453
15°	1448	1446	1455
20°	1438	1445	1459
25°	1432	1448	1463
30°	1420	1444	1468
35°	1406	1440	1473
40°	1391	1438	1492
45°	1367	1439	1526
50°	1337	1447	1572
55°	1303	1471	1642
60°	1248	1499	1733
65°	1168	1552	1839
70°	1063	1624	1978
75°	901	1713	2066
80°	711	1724	1672
85°	525	1311	1468



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	102.2	3.0
10°-20°	294.0	8.6
20°-30°	449.6	13.1
30°-40°	549.7	16.0
40°-50°	585.9	17.1
50°-60°	560.2	16.4
60°-70°	474.5	13.9
70°-80°	318.9	9.3
80°-90°	90.0	2.6
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°	845.9	24.7
0°-40°	1395.6	40.7
0°-60°	2541.6	74.2
0°-90°	3425.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3425.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1077	1077	1077	1077	1077	
5°	1077	1075	1070	1075	1075	102
15°	1040	1040	1038	1046	1045	293
25°	965	968	975	984	985	445
35°	856	863	877	894	897	536
45°	719	730	756	788	802	554
55°	556	576	627	676	700	495
65°	367	404	488	552	578	364
75°	173	236	330	386	398	186
85°	34	70	85	92	95	42
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1077.1	1077.1	1077.1	1077.1	1077.1
2.5°	1078.8	1078.8	1073.7	1077.1	1077.1
5°	1077.1	1075.4	1070.3	1075.4	1075.4
7.5°	1072.0	1070.3	1066.9	1072.0	1070.3
10°	1061.8	1061.8	1058.4	1063.5	1063.5
12.5°	1053.3	1051.6	1049.9	1056.7	1055.0
15°	1039.7	1039.7	1038.0	1046.5	1044.8
17.5°	1022.7	1024.4	1026.1	1032.9	1034.6
20°	1004.0	1007.4	1009.1	1019.3	1019.3
22.5°	987.0	988.7	992.1	1002.3	1002.3
25°	964.9	968.3	975.1	983.6	985.3
27.5°	942.9	944.6	953.0	964.9	966.6
30°	914.0	919.1	929.3	942.9	944.6
32.5°	888.5	893.6	905.5	919.1	922.5
35°	856.2	863.0	876.6	893.6	897.0
37.5°	827.3	832.4	849.4	868.1	873.2
40°	791.7	801.9	818.8	840.9	849.4
42.5°	756.0	766.2	786.6	815.4	825.6
45°	718.6	730.5	756.0	788.3	801.9
47.5°	681.2	694.8	723.7	761.1	776.4
50°	638.8	655.8	691.4	733.9	750.9
52.5°	598.0	618.4	657.5	705.0	727.1
55°	555.5	575.9	626.9	676.1	699.9
57.5°	508.0	535.1	591.2	647.3	672.7
60°	463.8	489.3	557.2	618.4	643.9
62.5°	416.2	450.2	523.2	587.8	613.3
65°	366.9	404.3	487.6	552.1	577.6
67.5°	322.8	363.6	451.9	516.4	541.9
70°	270.1	321.1	412.8	477.4	502.9
72.5°	220.8	276.9	372.0	434.9	458.7
75°	173.3	236.1	329.6	385.6	397.5
77.5°	129.1	195.4	285.4	309.2	300.7
80°	91.7	156.3	222.5	210.7	215.8
82.5°	59.5	118.9	137.6	156.3	161.4
85°	34.0	69.7	84.9	91.7	95.1
87.5°	15.3	25.5	34.0	34.0	32.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)