

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: P309644

Luminaire Tested: **24FCZ2-60HE-UNV-L82765-HRP-CA125-W2A-U-2700K**

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: P309644
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: 24FCZ2-60HE-UNV-L82765-HRP-CA125-W2A-U-2700K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125"
ACRYLIC SHEET
Light Source: (336) 2700K 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: 3825.0 lumens
Efficiency: N/A
Efficacy: 80.4 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

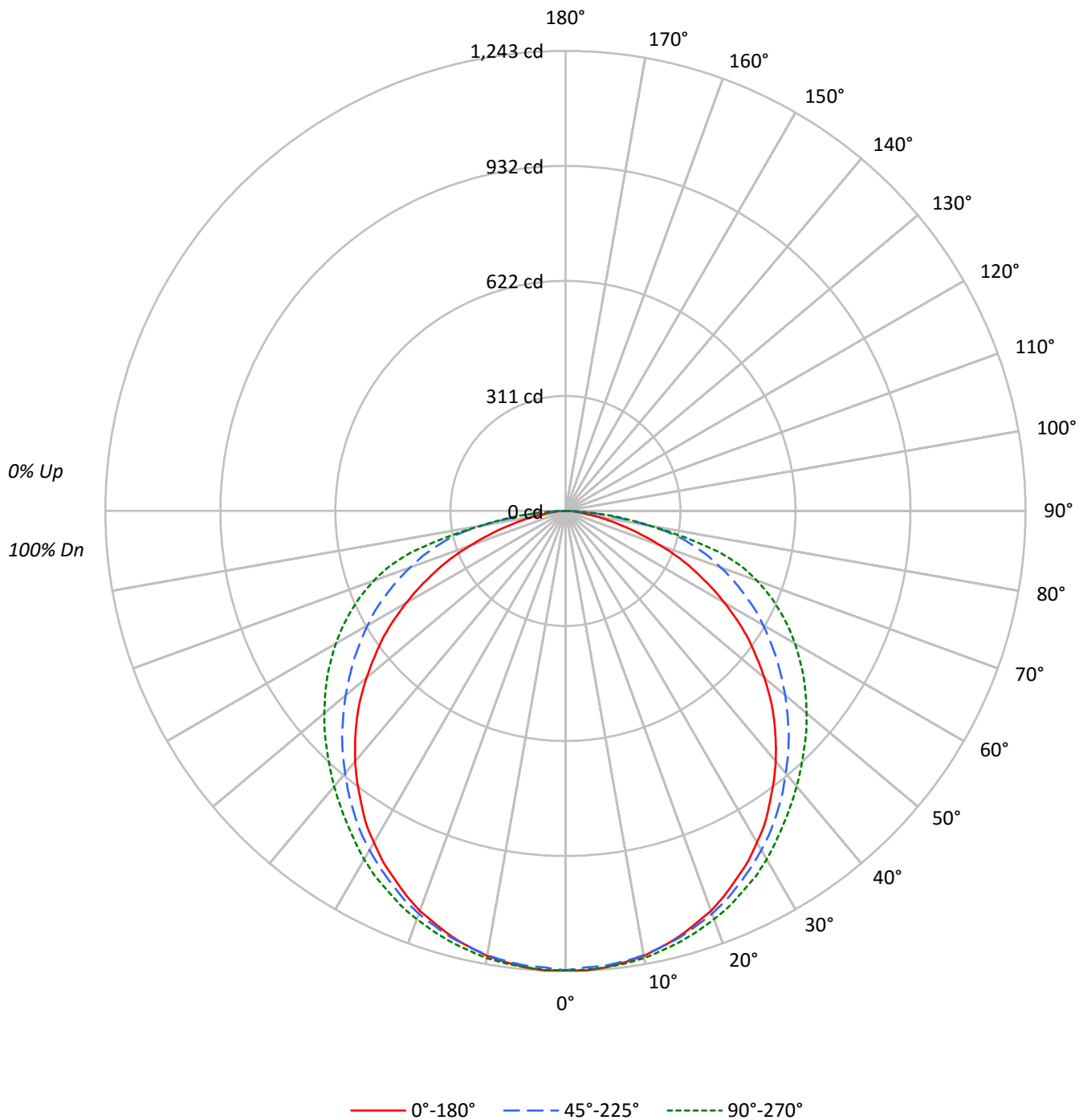
Input Watts (W): 47.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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		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°	1670	1670	1670
5°	1672	1665	1672
10°	1667	1665	1676
15°	1657	1662	1677
20°	1646	1658	1681
25°	1626	1650	1683
30°	1607	1645	1689
35°	1581	1636	1691
40°	1552	1626	1707
45°	1517	1624	1734
50°	1468	1622	1780
55°	1416	1634	1844
60°	1336	1659	1926
65°	1234	1698	2034
70°	1077	1758	2167
75°	874	1848	2240
80°	645	1812	1812
85°	494	1335	1508



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	117.6	3.1
10°-20°	337.6	8.8
20°-30°	514.0	13.4
30°-40°	624.1	16.3
40°-50°	659.3	17.2
50°-60°	622.1	16.3
60°-70°	517.3	13.5
70°-80°	340.3	8.9
80°-90°	92.8	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°	969.1	25.3
0°-40°	1593.2	41.7
0°-60°	2874.6	75.2
0°-90°	3825.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3825.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1241	1241	1241	1241	1241	
5°	1238	1238	1233	1238	1238	118
15°	1190	1191	1193	1204	1204	336
25°	1095	1102	1111	1130	1134	505
35°	962	974	996	1022	1030	602
45°	798	814	854	895	911	614
55°	604	629	697	762	786	538
65°	388	432	533	612	639	383
75°	168	245	356	421	431	181
85°	32	70	86	96	98	39
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1241.0	1241.0	1241.0	1241.0	1241.0
2.5°	1242.6	1241.0	1234.6	1241.0	1241.0
5°	1237.8	1237.8	1233.0	1237.8	1237.8
7.5°	1229.8	1229.8	1226.6	1233.0	1233.0
10°	1220.2	1220.2	1218.6	1226.6	1226.6
12.5°	1205.8	1207.4	1205.8	1215.4	1215.4
15°	1189.8	1191.4	1193.0	1204.2	1204.2
17.5°	1169.0	1172.2	1175.4	1188.2	1189.8
20°	1149.7	1151.4	1157.8	1172.2	1173.8
22.5°	1124.1	1128.9	1136.9	1151.4	1156.2
25°	1095.3	1101.7	1111.3	1130.5	1133.7
27.5°	1068.1	1072.9	1085.7	1106.5	1112.9
30°	1034.5	1042.5	1058.5	1079.3	1087.3
32.5°	1002.4	1010.4	1029.6	1052.1	1058.5
35°	962.4	973.6	996.0	1021.6	1029.6
37.5°	924.0	935.2	962.4	991.2	1000.8
40°	883.9	896.7	925.6	959.2	972.0
42.5°	840.7	858.3	890.3	927.2	941.6
45°	797.5	813.5	853.5	895.1	911.2
47.5°	751.0	770.2	813.5	863.1	882.3
50°	701.4	725.4	775.0	829.5	850.3
52.5°	651.7	679.0	735.0	795.9	818.3
55°	603.7	629.3	696.6	762.2	786.2
57.5°	550.9	582.9	656.5	727.0	751.0
60°	496.4	531.6	616.5	690.2	715.8
62.5°	442.0	482.0	578.1	651.7	679.0
65°	387.5	432.4	533.2	611.7	638.9
67.5°	334.7	384.3	491.6	570.1	597.3
70°	273.8	336.3	446.8	523.6	550.9
72.5°	217.8	289.8	403.5	475.6	499.6
75°	168.1	245.0	355.5	421.1	430.8
77.5°	123.3	200.2	305.9	328.3	329.9
80°	83.3	160.1	233.8	230.6	233.8
82.5°	54.4	120.1	147.3	164.9	166.5
85°	32.0	70.5	86.5	96.1	97.7
87.5°	16.0	24.0	30.4	32.0	35.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)