

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: P313699

Luminaire Tested: **24FCZ2-60HE-UNV-L83050-RDP-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: P313699
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-CA125-W2A-U-5000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 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: 3918.0 lumens
Efficiency: N/A
Efficacy: 78.5 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

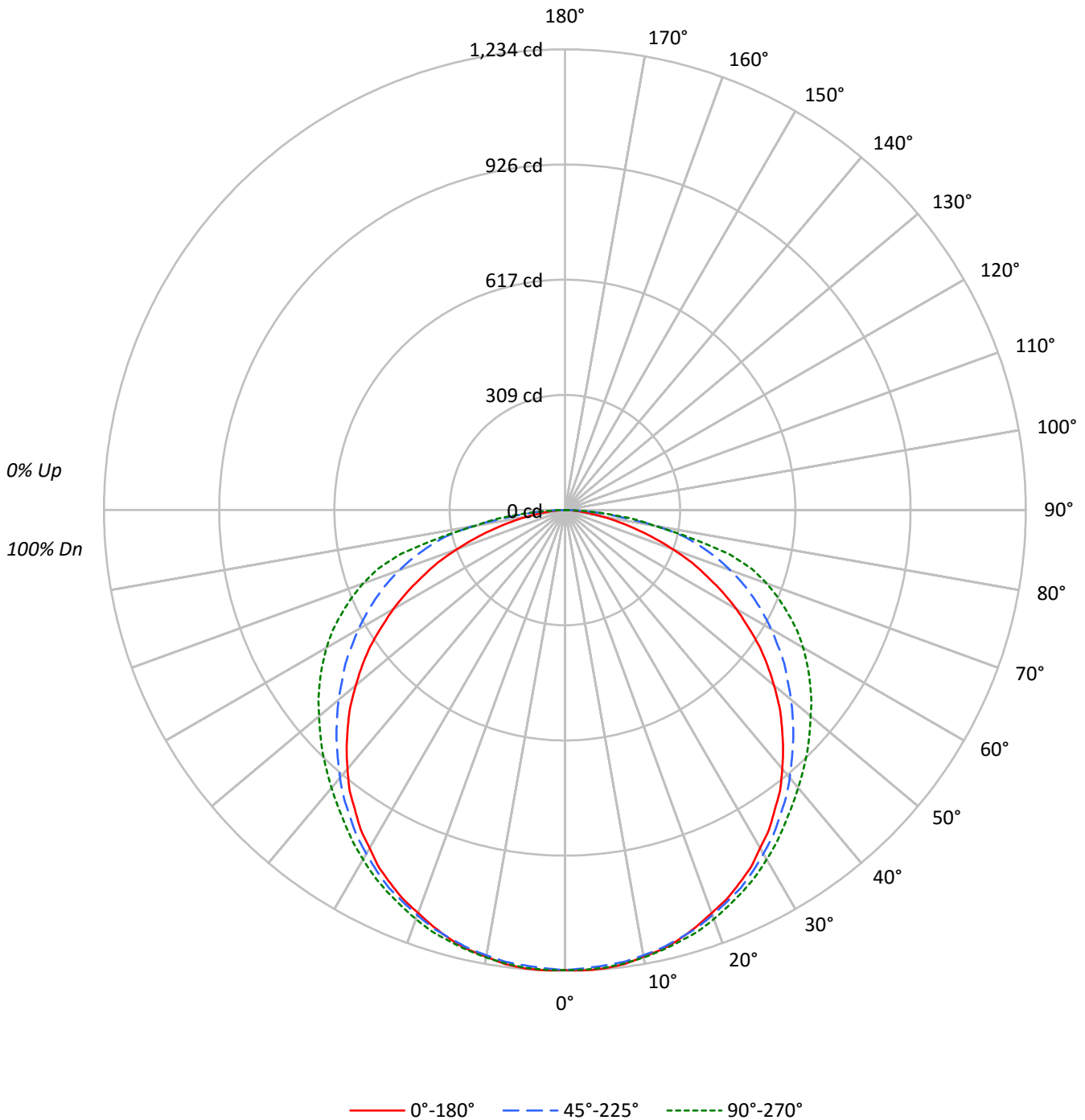
Input Watts (W): 49.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1658	1658	1658
5°	1664	1654	1662
10°	1659	1654	1662
15°	1657	1654	1665
20°	1644	1653	1670
25°	1639	1656	1673
30°	1624	1652	1679
35°	1609	1647	1685
40°	1591	1645	1707
45°	1564	1646	1745
50°	1530	1656	1798
55°	1491	1682	1878
60°	1428	1715	1982
65°	1337	1776	2103
70°	1216	1858	2263
75°	1030	1960	2364
80°	813	1973	1912
85°	601	1501	1680



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	116.9	3.0
10°-20°	336.4	8.6
20°-30°	514.4	13.1
30°-40°	628.8	16.0
40°-50°	670.2	17.1
50°-60°	640.8	16.4
60°-70°	542.8	13.9
70°-80°	364.8	9.3
80°-90°	102.9	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°	967.6	24.7
0°-40°	1596.4	40.7
0°-60°	2907.4	74.2
0°-90°	3918.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3918.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1232	1232	1232	1232	1232	
5°	1232	1230	1224	1230	1230	117
15°	1189	1189	1187	1197	1195	335
25°	1104	1108	1116	1125	1127	509
35°	980	987	1003	1022	1026	614
45°	822	836	865	902	917	634
55°	636	659	717	774	801	566
65°	420	462	558	632	661	417
75°	198	270	377	441	455	212
85°	39	80	97	105	109	48
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1232.1	1232.1	1232.1	1232.1	1232.1
2.5°	1234.0	1234.0	1228.2	1232.1	1232.1
5°	1232.1	1230.2	1224.3	1230.2	1230.2
7.5°	1226.3	1224.3	1220.4	1226.3	1224.3
10°	1214.6	1214.6	1210.7	1216.6	1216.6
12.5°	1204.9	1202.9	1201.0	1208.8	1206.8
15°	1189.3	1189.3	1187.4	1197.1	1195.2
17.5°	1169.9	1171.9	1173.8	1181.6	1183.5
20°	1148.5	1152.4	1154.4	1166.0	1166.0
22.5°	1129.1	1131.0	1134.9	1146.6	1146.6
25°	1103.8	1107.7	1115.5	1125.2	1127.2
27.5°	1078.6	1080.5	1090.2	1103.8	1105.8
30°	1045.5	1051.4	1063.0	1078.6	1080.5
32.5°	1016.4	1022.2	1035.8	1051.4	1055.3
35°	979.5	987.2	1002.8	1022.2	1026.1
37.5°	946.4	952.3	971.7	993.1	998.9
40°	905.6	917.3	936.7	962.0	971.7
42.5°	864.8	876.5	899.8	932.8	944.5
45°	822.0	835.7	864.8	901.7	917.3
47.5°	779.3	794.8	827.9	870.6	888.1
50°	730.7	750.1	791.0	839.5	859.0
52.5°	684.1	707.4	752.1	806.5	831.8
55°	635.5	658.8	717.1	773.5	800.7
57.5°	581.1	612.2	676.3	740.4	769.6
60°	530.5	559.7	637.4	707.4	736.5
62.5°	476.1	515.0	598.6	672.4	701.6
65°	419.8	462.5	557.7	631.6	660.7
67.5°	369.2	415.9	516.9	590.8	619.9
70°	309.0	367.3	472.2	546.1	575.2
72.5°	252.6	316.8	425.6	497.5	524.7
75°	198.2	270.1	377.0	441.1	454.7
77.5°	147.7	223.5	326.5	353.7	344.0
80°	104.9	178.8	254.6	241.0	246.8
82.5°	68.0	136.0	157.4	178.8	184.6
85°	38.9	79.7	97.2	104.9	108.8
87.5°	17.5	29.2	38.9	38.9	36.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)