

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: P313325

Luminaire Tested: **24FCZ2-60HE-UNV-L83050-HRP-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: P313325
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-L83050-HRP-CP125-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 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: 3955.0 lumens
Efficiency: N/A
Efficacy: 83.3 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

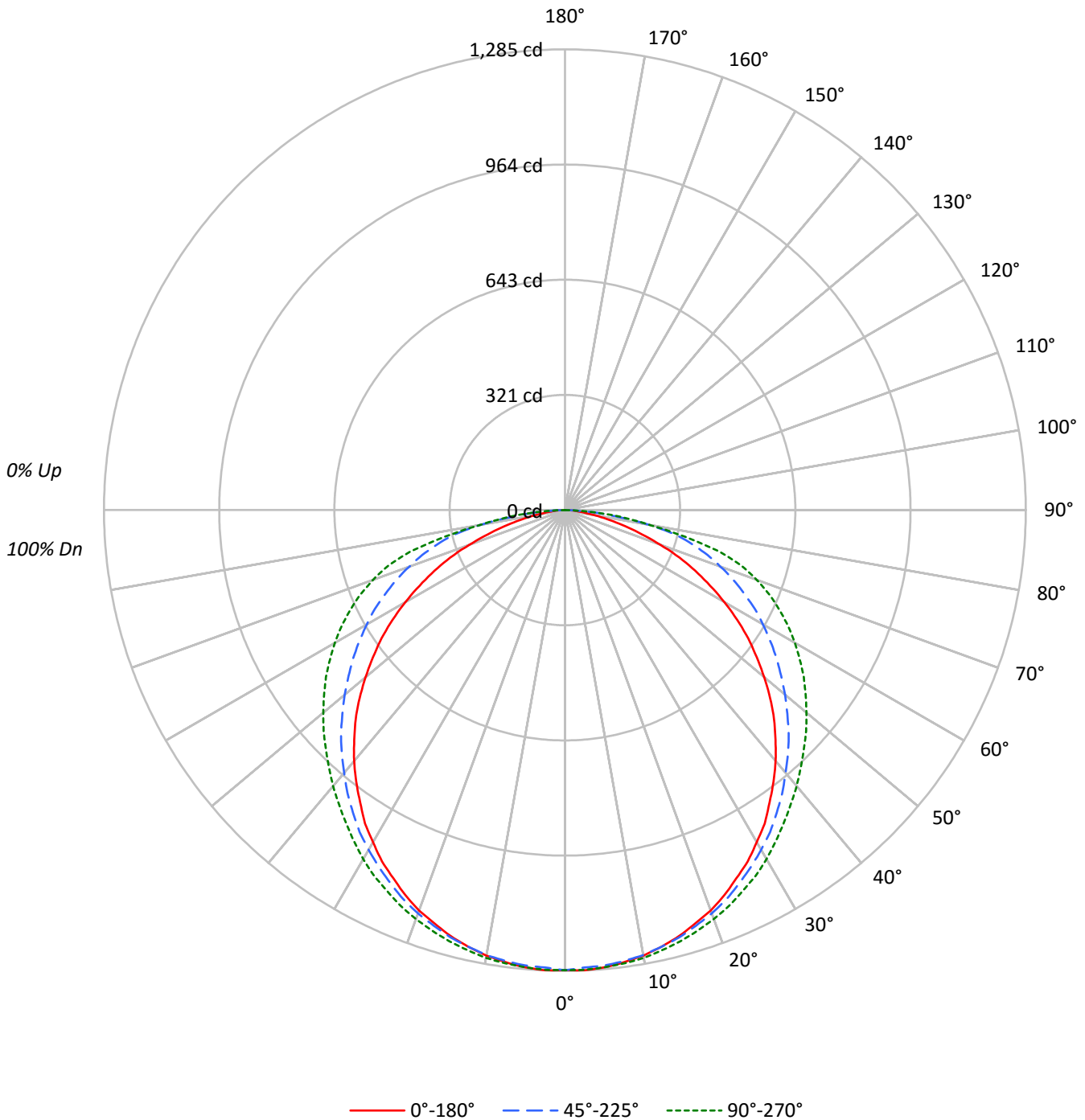
Input Watts (W): 47.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				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	101	96	93	96	93	90	92	90	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	59	68	63	58	56
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	36	30	57	44	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	24	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1727	1727	1727
5°	1729	1722	1729
10°	1724	1721	1733
15°	1714	1718	1734
20°	1702	1714	1738
25°	1681	1706	1740
30°	1662	1700	1747
35°	1634	1692	1749
40°	1605	1681	1765
45°	1569	1679	1793
50°	1518	1677	1840
55°	1464	1689	1907
60°	1381	1715	1992
65°	1276	1755	2103
70°	1114	1817	2241
75°	904	1911	2315
80°	667	1873	1873
85°	511	1380	1559



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	121.6	3.1
10°-20°	349.1	8.8
20°-30°	531.4	13.4
30°-40°	645.3	16.3
40°-50°	681.7	17.2
50°-60°	643.3	16.3
60°-70°	534.9	13.5
70°-80°	351.9	8.9
80°-90°	95.9	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°	1002.1	25.3
0°-40°	1647.3	41.7
0°-60°	2972.3	75.2
0°-90°	3955.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3955.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1283	1283	1283	1283	1283	
5°	1280	1280	1275	1280	1280	122
15°	1230	1232	1234	1245	1245	347
25°	1132	1139	1149	1169	1172	522
35°	995	1007	1030	1056	1065	623
45°	825	841	882	926	942	635
55°	624	651	720	788	813	556
65°	401	447	551	632	661	396
75°	174	253	368	436	445	187
85°	33	73	89	99	101	41
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1283.2	1283.2	1283.2	1283.2	1283.2
2.5°	1284.9	1283.2	1276.6	1283.2	1283.2
5°	1279.9	1279.9	1274.9	1279.9	1279.9
7.5°	1271.6	1271.6	1268.3	1274.9	1274.9
10°	1261.7	1261.7	1260.0	1268.3	1268.3
12.5°	1246.8	1248.4	1246.8	1256.7	1256.7
15°	1230.2	1231.9	1233.5	1245.1	1245.1
17.5°	1208.7	1212.0	1215.3	1228.6	1230.2
20°	1188.8	1190.5	1197.1	1212.0	1213.7
22.5°	1162.3	1167.3	1175.6	1190.5	1195.4
25°	1132.5	1139.2	1149.1	1169.0	1172.3
27.5°	1104.4	1109.3	1122.6	1144.1	1150.7
30°	1069.6	1077.9	1094.4	1116.0	1124.3
32.5°	1036.5	1044.8	1064.6	1087.8	1094.4
35°	995.1	1006.7	1029.9	1056.4	1064.6
37.5°	955.4	967.0	995.1	1024.9	1034.8
40°	914.0	927.2	957.0	991.8	1005.0
42.5°	869.3	887.5	920.6	958.7	973.6
45°	824.6	841.1	882.5	925.6	942.1
47.5°	776.5	796.4	841.1	892.4	912.3
50°	725.2	750.1	801.4	857.7	879.2
52.5°	673.9	702.0	760.0	822.9	846.1
55°	624.2	650.7	720.2	788.1	813.0
57.5°	569.6	602.7	678.9	751.7	776.5
60°	513.3	549.7	637.5	713.6	740.1
62.5°	457.0	498.4	597.7	673.9	702.0
65°	400.7	447.1	551.4	632.5	660.6
67.5°	346.1	397.4	508.3	589.4	617.6
70°	283.1	347.7	462.0	541.4	569.6
72.5°	225.2	299.7	417.2	491.8	516.6
75°	173.9	253.3	367.6	435.5	445.4
77.5°	127.5	207.0	316.2	339.4	341.1
80°	86.1	165.6	241.7	238.4	241.7
82.5°	56.3	124.2	152.3	170.5	172.2
85°	33.1	72.9	89.4	99.3	101.0
87.5°	16.6	24.8	31.5	33.1	36.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)