

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: P313254

Luminaire Tested: **24FCZ2-50HE-UNV-L83050-HRP-CP125-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: P313254
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: 24FCZ2-50HE-UNV-L83050-HRP-CP125-W2A-U-5000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" POLYCARB 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: 3697.0 lumens
Efficiency: N/A
Efficacy: 91.7 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

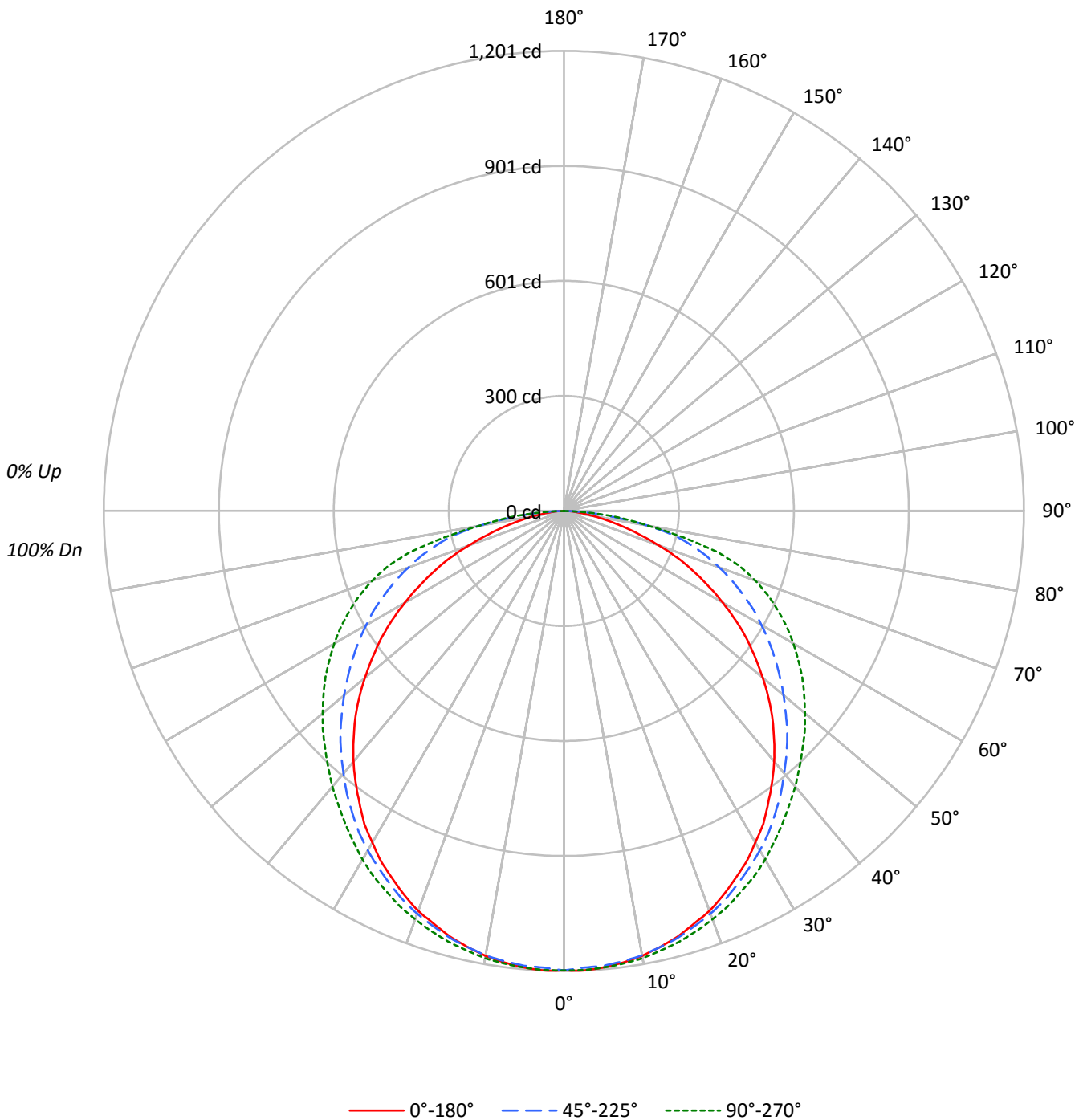
Input Watts (W): 40.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1614	1614	1614
5°	1616	1610	1616
10°	1611	1609	1620
15°	1602	1606	1621
20°	1591	1602	1624
25°	1572	1595	1627
30°	1553	1590	1633
35°	1528	1581	1635
40°	1501	1571	1650
45°	1467	1570	1676
50°	1419	1568	1720
55°	1369	1579	1783
60°	1291	1604	1862
65°	1193	1641	1966
70°	1041	1699	2094
75°	845	1786	2164
80°	624	1751	1751
85°	479	1291	1457



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	113.6	3.1
10°-20°	326.3	8.8
20°-30°	496.8	13.4
30°-40°	603.2	16.3
40°-50°	637.2	17.2
50°-60°	601.3	16.3
60°-70°	500.0	13.5
70°-80°	328.9	8.9
80°-90°	89.7	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°	936.7	25.3
0°-40°	1539.9	41.7
0°-60°	2778.4	75.2
0°-90°	3697.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3697.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1200	1200	1200	1200	1200	
5°	1196	1196	1192	1196	1196	114
15°	1150	1152	1153	1164	1164	324
25°	1059	1065	1074	1093	1096	488
35°	930	941	963	988	995	582
45°	771	786	825	865	881	594
55°	584	608	673	737	760	520
65°	375	418	515	591	618	370
75°	162	237	344	407	416	175
85°	31	68	84	93	94	38
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1199.5	1199.5	1199.5	1199.5	1199.5
2.5°	1201.0	1199.5	1193.3	1199.5	1199.5
5°	1196.4	1196.4	1191.8	1196.4	1196.4
7.5°	1188.7	1188.7	1185.6	1191.8	1191.8
10°	1179.4	1179.4	1177.8	1185.6	1185.6
12.5°	1165.4	1167.0	1165.4	1174.7	1174.7
15°	1150.0	1151.5	1153.1	1163.9	1163.9
17.5°	1129.8	1132.9	1136.0	1148.4	1150.0
20°	1111.3	1112.8	1119.0	1132.9	1134.5
22.5°	1086.5	1091.2	1098.9	1112.8	1117.5
25°	1058.7	1064.8	1074.1	1092.7	1095.8
27.5°	1032.3	1037.0	1049.4	1069.5	1075.7
30°	999.8	1007.6	1023.1	1043.2	1050.9
32.5°	968.9	976.6	995.2	1016.9	1023.1
35°	930.2	941.0	962.7	987.5	995.2
37.5°	893.0	903.9	930.2	958.0	967.3
40°	854.3	866.7	894.6	927.1	939.5
42.5°	812.6	829.6	860.5	896.1	910.1
45°	770.8	786.2	824.9	865.2	880.7
47.5°	725.9	744.5	786.2	834.2	852.8
50°	677.9	701.1	749.1	801.7	821.8
52.5°	629.9	656.2	710.4	769.2	790.9
55°	583.5	608.3	673.3	736.7	759.9
57.5°	532.4	563.4	634.6	702.7	725.9
60°	479.8	513.8	595.9	667.1	691.8
62.5°	427.2	465.9	558.7	629.9	656.2
65°	374.6	417.9	515.4	591.2	617.5
67.5°	323.5	371.5	475.2	551.0	577.3
70°	264.7	325.0	431.8	506.1	532.4
72.5°	210.5	280.1	390.0	459.7	482.9
75°	162.5	236.8	343.6	407.1	416.3
77.5°	119.2	193.5	295.6	317.3	318.8
80°	80.5	154.8	226.0	222.9	226.0
82.5°	52.6	116.1	142.4	159.4	161.0
85°	31.0	68.1	83.6	92.9	94.4
87.5°	15.5	23.2	29.4	31.0	34.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)