

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: P309671

Luminaire Tested: **24FCZ2-60HE-UNV-L82765-HRP-CP250-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: P309671
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-CP250-W2A-U-2700K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.250"
POLYCARB 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: 3563.0 lumens
Efficiency: N/A
Efficacy: 74.9 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

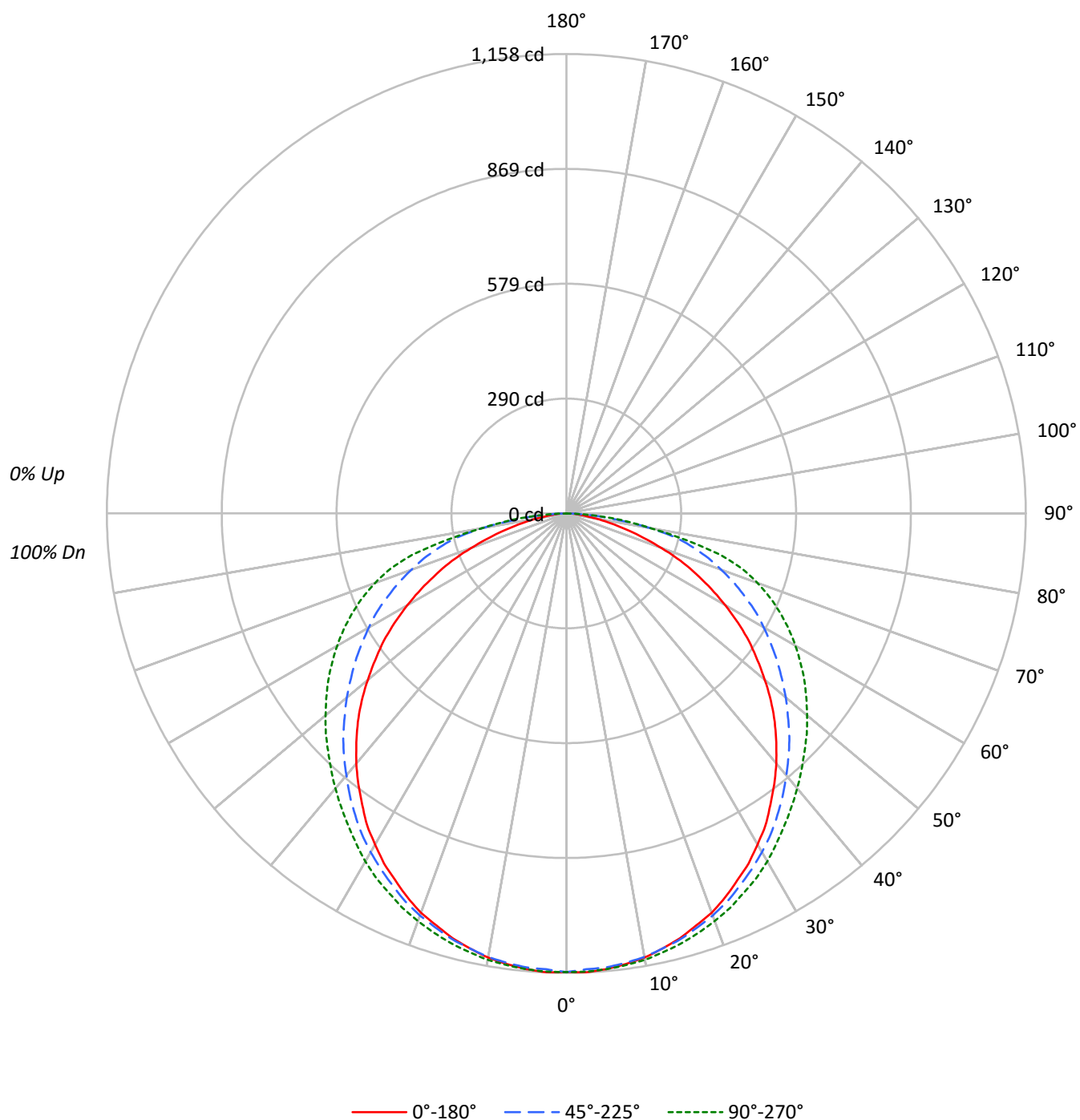
Input Watts (W): 47.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1555	1555	1555
5°	1557	1551	1557
10°	1553	1551	1561
15°	1544	1548	1562
20°	1534	1544	1566
25°	1515	1537	1568
30°	1497	1532	1574
35°	1473	1524	1575
40°	1446	1514	1590
45°	1413	1513	1615
50°	1367	1511	1658
55°	1319	1522	1718
60°	1244	1545	1794
65°	1149	1581	1895
70°	1004	1637	2019
75°	814	1721	2086
80°	601	1688	1688
85°	460	1243	1405



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	109.5	3.1
10°-20°	314.5	8.8
20°-30°	478.8	13.4
30°-40°	581.3	16.3
40°-50°	614.2	17.2
50°-60°	579.5	16.3
60°-70°	481.9	13.5
70°-80°	317.0	8.9
80°-90°	86.4	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°	902.7	25.3
0°-40°	1484.1	41.7
0°-60°	2677.7	75.2
0°-90°	3563.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3563.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1156	1156	1156	1156	1156	
5°	1153	1153	1149	1153	1153	110
15°	1108	1110	1111	1122	1122	313
25°	1020	1026	1035	1053	1056	471
35°	896	907	928	952	959	561
45°	743	758	795	834	849	572
55°	562	586	649	710	732	501
65°	361	403	497	570	595	357
75°	157	228	331	392	401	169
85°	30	66	80	90	91	37
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1156.0	1156.0	1156.0	1156.0	1156.0
2.5°	1157.5	1156.0	1150.1	1156.0	1156.0
5°	1153.0	1153.0	1148.6	1153.0	1153.0
7.5°	1145.6	1145.6	1142.6	1148.6	1148.6
10°	1136.6	1136.6	1135.1	1142.6	1142.6
12.5°	1123.2	1124.7	1123.2	1132.2	1132.2
15°	1108.3	1109.8	1111.3	1121.7	1121.7
17.5°	1088.9	1091.9	1094.9	1106.8	1108.3
20°	1071.0	1072.5	1078.5	1091.9	1093.4
22.5°	1047.1	1051.6	1059.1	1072.5	1077.0
25°	1020.3	1026.2	1035.2	1053.1	1056.1
27.5°	994.9	999.4	1011.3	1030.7	1036.7
30°	963.6	971.1	986.0	1005.4	1012.8
32.5°	933.8	941.2	959.1	980.0	986.0
35°	896.5	906.9	927.8	951.7	959.1
37.5°	860.7	871.1	896.5	923.3	932.3
40°	823.4	835.3	862.2	893.5	905.4
42.5°	783.1	799.5	829.3	863.7	877.1
45°	742.8	757.8	795.0	833.8	848.7
47.5°	699.6	717.5	757.8	804.0	821.9
50°	653.3	675.7	722.0	772.7	792.1
52.5°	607.1	632.5	684.7	741.3	762.2
55°	562.3	586.2	648.9	710.0	732.4
57.5°	513.1	543.0	611.6	677.2	699.6
60°	462.4	495.2	574.3	642.9	666.8
62.5°	411.7	449.0	538.5	607.1	632.5
65°	361.0	402.7	496.7	569.8	595.2
67.5°	311.8	358.0	457.9	531.0	556.4
70°	255.1	313.2	416.2	487.8	513.1
72.5°	202.9	270.0	375.9	443.0	465.4
75°	156.6	228.2	331.1	392.3	401.3
77.5°	114.9	186.5	284.9	305.8	307.3
80°	77.6	149.2	217.8	214.8	217.8
82.5°	50.7	111.9	137.2	153.6	155.1
85°	29.8	65.6	80.5	89.5	91.0
87.5°	14.9	22.4	28.3	29.8	32.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)