

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: P309673

Luminaire Tested: **24FCZ2-60HE-UNV-L82765-HRP-CP250-W2A-U-3500K**

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: P309673
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-3500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.250"
POLYCARB SHEET
Light Source: (336) 3500K 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: 3792.0 lumens
Efficiency: N/A
Efficacy: 79.3 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

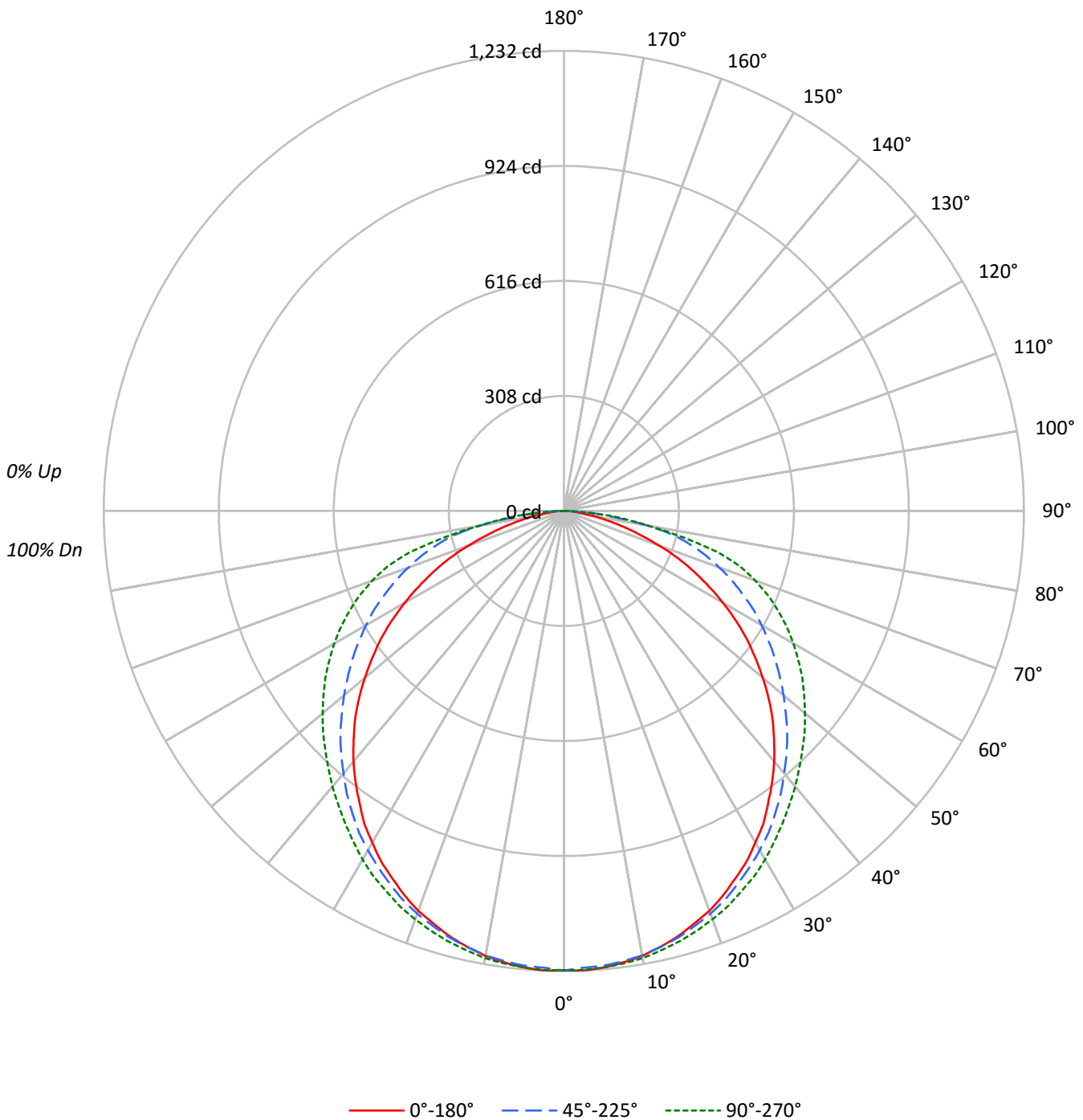
Input Watts (W): 47.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1655	1655	1655
5°	1657	1651	1657
10°	1653	1651	1661
15°	1643	1647	1663
20°	1632	1643	1666
25°	1612	1636	1669
30°	1593	1630	1675
35°	1567	1622	1677
40°	1539	1612	1692
45°	1504	1610	1719
50°	1455	1608	1765
55°	1404	1620	1829
60°	1324	1645	1910
65°	1223	1683	2017
70°	1068	1742	2148
75°	867	1832	2220
80°	640	1796	1796
85°	491	1323	1494



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	116.5	3.1
10°-20°	334.7	8.8
20°-30°	509.5	13.4
30°-40°	618.7	16.3
40°-50°	653.6	17.2
50°-60°	616.8	16.3
60°-70°	512.8	13.5
70°-80°	337.4	8.9
80°-90°	92.0	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°	960.8	25.3
0°-40°	1579.4	41.7
0°-60°	2849.8	75.2
0°-90°	3792.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3792.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1230	1230	1230	1230	1230	
5°	1227	1227	1222	1227	1227	117
15°	1180	1181	1183	1194	1194	333
25°	1086	1092	1102	1121	1124	501
35°	954	965	987	1013	1021	597
45°	791	806	846	887	903	609
55°	598	624	691	756	780	533
65°	384	429	529	606	633	380
75°	167	243	352	418	427	180
85°	32	70	86	95	97	39
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1230.3	1230.3	1230.3	1230.3	1230.3
2.5°	1231.9	1230.3	1224.0	1230.3	1230.3
5°	1227.1	1227.1	1222.4	1227.1	1227.1
7.5°	1219.2	1219.2	1216.0	1222.4	1222.4
10°	1209.7	1209.7	1208.1	1216.0	1216.0
12.5°	1195.4	1197.0	1195.4	1204.9	1204.9
15°	1179.5	1181.1	1182.7	1193.8	1193.8
17.5°	1158.9	1162.1	1165.2	1177.9	1179.5
20°	1139.8	1141.4	1147.8	1162.1	1163.6
22.5°	1114.4	1119.2	1127.1	1141.4	1146.2
25°	1085.9	1092.2	1101.7	1120.8	1124.0
27.5°	1058.9	1063.6	1076.3	1097.0	1103.3
30°	1025.5	1033.5	1049.3	1070.0	1077.9
32.5°	993.8	1001.7	1020.8	1043.0	1049.3
35°	954.1	965.2	987.4	1012.8	1020.8
37.5°	916.0	927.1	954.1	982.7	992.2
40°	876.3	889.0	917.6	950.9	963.6
42.5°	833.4	850.9	882.7	919.2	933.5
45°	790.6	806.5	846.1	887.4	903.3
47.5°	744.5	763.6	806.5	855.7	874.7
50°	695.3	719.1	768.4	822.3	843.0
52.5°	646.1	673.1	728.7	789.0	811.2
55°	598.5	623.9	690.6	755.7	779.5
57.5°	546.1	577.9	650.9	720.7	744.5
60°	492.1	527.1	611.2	684.2	709.6
62.5°	438.2	477.8	573.1	646.1	673.1
65°	384.2	428.6	528.6	606.4	633.4
67.5°	331.8	381.0	487.4	565.2	592.1
70°	271.5	333.4	442.9	519.1	546.1
72.5°	215.9	287.3	400.1	471.5	495.3
75°	166.7	242.9	352.4	417.5	427.0
77.5°	122.2	198.4	303.2	325.4	327.0
80°	82.6	158.8	231.8	228.6	231.8
82.5°	54.0	119.1	146.1	163.5	165.1
85°	31.8	69.9	85.7	95.3	96.8
87.5°	15.9	23.8	30.2	31.8	34.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)