

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: P310327

Luminaire Tested: **24FCZ2-60HE-UNV-L82765-RDP-CA125-W2A-U-6500K**

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: P310327
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-L82765-RDP-CA125-W2A-U-6500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" ACRYLIC SHEET
Light Source: (336) 6500K 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: 3863.0 lumens
Efficiency: N/A
Efficacy: 77.7 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

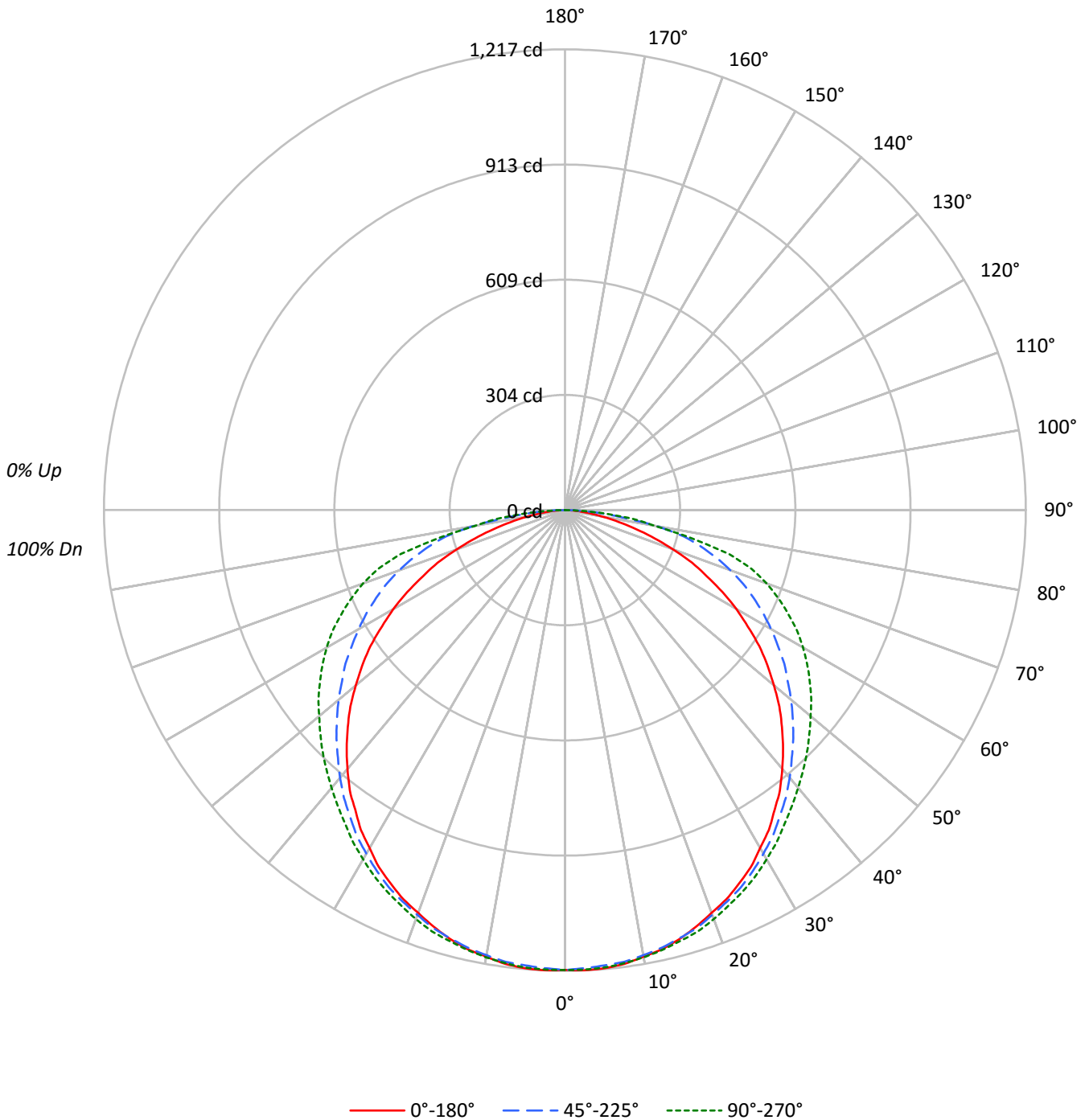
Input Watts (W): 49.7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1635	1635	1635
5°	1641	1630	1638
10°	1636	1631	1639
15°	1633	1631	1641
20°	1621	1630	1646
25°	1616	1633	1650
30°	1602	1628	1655
35°	1586	1624	1662
40°	1568	1622	1683
45°	1542	1623	1721
50°	1508	1632	1773
55°	1470	1658	1852
60°	1408	1691	1954
65°	1318	1751	2074
70°	1199	1832	2231
75°	1016	1932	2331
80°	802	1945	1885
85°	591	1479	1656



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	115.2	3.0
10°-20°	331.6	8.6
20°-30°	507.2	13.1
30°-40°	620.0	16.0
40°-50°	660.8	17.1
50°-60°	631.8	16.4
60°-70°	535.2	13.9
70°-80°	359.7	9.3
80°-90°	101.5	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°	954.0	24.7
0°-40°	1574.0	40.7
0°-60°	2866.6	74.2
0°-90°	3863.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3863.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1215	1215	1215	1215	1215	
5°	1215	1213	1207	1213	1213	115
15°	1173	1173	1171	1180	1178	331
25°	1088	1092	1100	1109	1111	502
35°	966	973	989	1008	1012	605
45°	810	824	853	889	904	625
55°	627	650	707	763	789	558
65°	414	456	550	623	652	411
75°	195	266	372	435	448	209
85°	38	79	96	104	107	47
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1214.8	1214.8	1214.8	1214.8	1214.8
2.5°	1216.7	1216.7	1211.0	1214.8	1214.8
5°	1214.8	1212.9	1207.1	1212.9	1212.9
7.5°	1209.1	1207.1	1203.3	1209.1	1207.1
10°	1197.6	1197.6	1193.7	1199.5	1199.5
12.5°	1188.0	1186.1	1184.1	1191.8	1189.9
15°	1172.6	1172.6	1170.7	1180.3	1178.4
17.5°	1153.5	1155.4	1157.3	1165.0	1166.9
20°	1132.4	1136.2	1138.2	1149.7	1149.7
22.5°	1113.3	1115.2	1119.0	1130.5	1130.5
25°	1088.3	1092.2	1099.8	1109.4	1111.3
27.5°	1063.4	1065.3	1074.9	1088.3	1090.3
30°	1030.9	1036.6	1048.1	1063.4	1065.3
32.5°	1002.1	1007.9	1021.3	1036.6	1040.4
35°	965.7	973.4	988.7	1007.9	1011.7
37.5°	933.1	938.9	958.0	979.1	984.9
40°	892.9	904.4	923.6	948.5	958.0
42.5°	852.7	864.2	887.2	919.7	931.2
45°	810.5	823.9	852.7	889.1	904.4
47.5°	768.4	783.7	816.3	858.4	875.7
50°	720.5	739.6	779.8	827.8	846.9
52.5°	674.5	697.5	741.5	795.2	820.1
55°	626.6	649.6	707.0	762.6	789.4
57.5°	572.9	603.6	666.8	730.0	758.8
60°	523.1	551.8	628.5	697.5	726.2
62.5°	469.4	507.8	590.2	663.0	691.7
65°	413.9	456.0	549.9	622.7	651.5
67.5°	364.1	410.0	509.7	582.5	611.2
70°	304.7	362.1	465.6	538.4	567.2
72.5°	249.1	312.3	419.6	490.5	517.3
75°	195.4	266.3	371.7	435.0	448.4
77.5°	145.6	220.4	321.9	348.7	339.1
80°	103.5	176.3	251.0	237.6	243.3
82.5°	67.1	134.1	155.2	176.3	182.0
85°	38.3	78.6	95.8	103.5	107.3
87.5°	17.2	28.7	38.3	38.3	36.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)