

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: P310336

Luminaire Tested: **24FCZ2-60HE-UNV-L82765-RDP-CP125-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: P310336
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-CP125-W2A-U-6500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" POLYCARB 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: 3788.0 lumens
Efficiency: N/A
Efficacy: 76.2 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

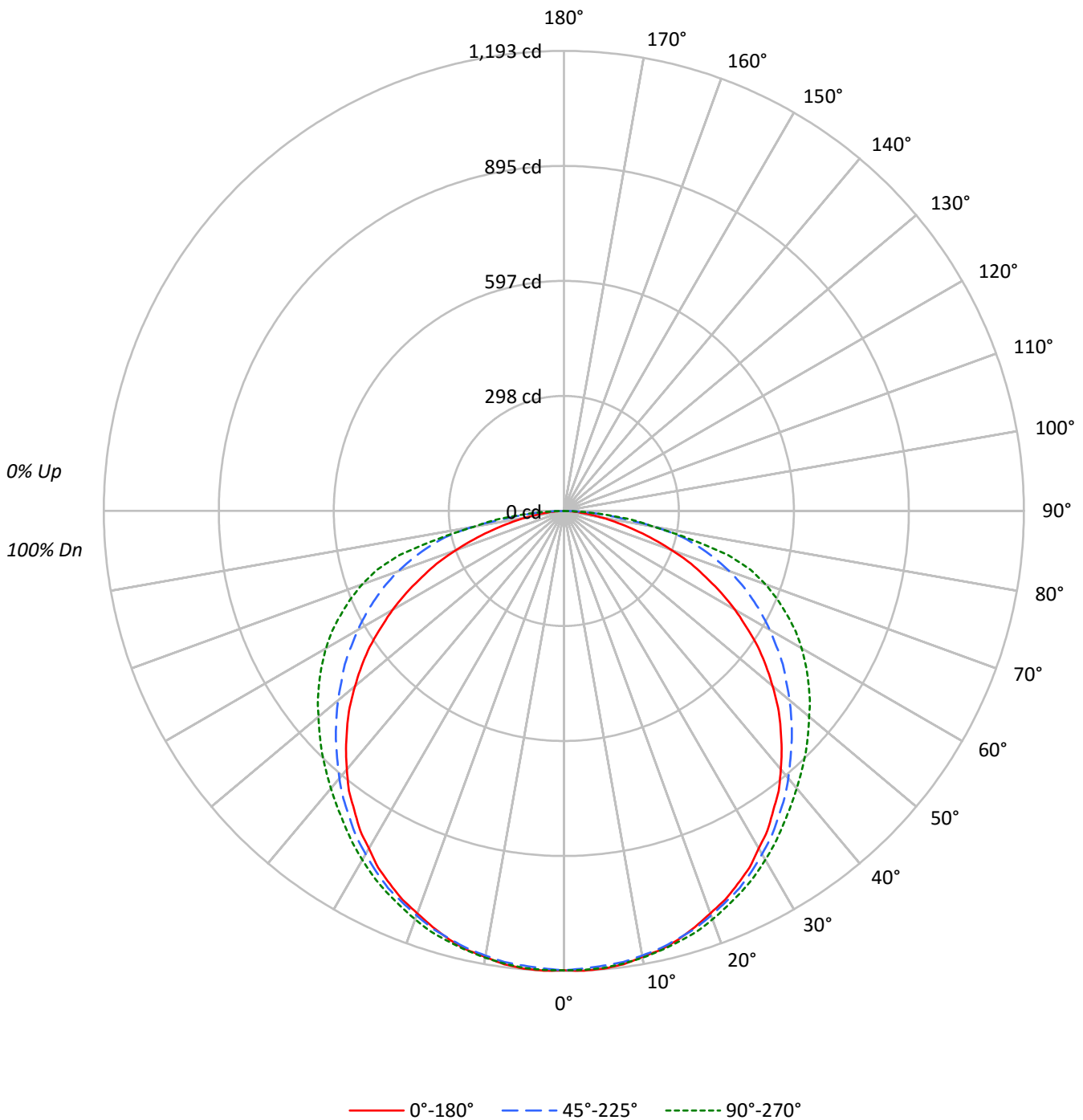
Input Watts (W): 49.7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1603	1603	1603
5°	1609	1599	1606
10°	1604	1599	1607
15°	1602	1599	1610
20°	1590	1598	1614
25°	1584	1601	1618
30°	1570	1597	1623
35°	1555	1592	1630
40°	1538	1591	1650
45°	1512	1591	1687
50°	1479	1601	1738
55°	1441	1626	1816
60°	1380	1658	1916
65°	1292	1717	2034
70°	1175	1796	2188
75°	996	1895	2286
80°	786	1907	1849
85°	580	1450	1624



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	113.0	3.0
10°-20°	325.2	8.6
20°-30°	497.3	13.1
30°-40°	608.0	16.0
40°-50°	648.0	17.1
50°-60°	619.5	16.4
60°-70°	524.8	13.9
70°-80°	352.7	9.3
80°-90°	99.5	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°	935.5	24.7
0°-40°	1543.5	40.7
0°-60°	2811.0	74.2
0°-90°	3788.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3788.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1191	1191	1191	1191	1191	
5°	1191	1189	1184	1189	1189	113
15°	1150	1150	1148	1157	1156	324
25°	1067	1071	1078	1088	1090	492
35°	947	954	970	988	992	593
45°	795	808	836	872	887	613
55°	614	637	693	748	774	547
65°	406	447	539	611	639	403
75°	192	261	364	426	440	205
85°	38	77	94	102	105	47
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1191.2	1191.2	1191.2	1191.2	1191.2
2.5°	1193.1	1193.1	1187.5	1191.2	1191.2
5°	1191.2	1189.3	1183.7	1189.3	1189.3
7.5°	1185.6	1183.7	1179.9	1185.6	1183.7
10°	1174.3	1174.3	1170.6	1176.2	1176.2
12.5°	1164.9	1163.0	1161.2	1168.7	1166.8
15°	1149.9	1149.9	1148.0	1157.4	1155.5
17.5°	1131.1	1133.0	1134.9	1142.4	1144.2
20°	1110.4	1114.2	1116.1	1127.3	1127.3
22.5°	1091.6	1093.5	1097.3	1108.5	1108.5
25°	1067.2	1071.0	1078.5	1087.9	1089.8
27.5°	1042.8	1044.7	1054.1	1067.2	1069.1
30°	1010.8	1016.5	1027.8	1042.8	1044.7
32.5°	982.7	988.3	1001.4	1016.5	1020.2
35°	947.0	954.5	969.5	988.3	992.1
37.5°	915.0	920.7	939.4	960.1	965.8
40°	875.6	886.8	905.6	930.1	939.4
42.5°	836.1	847.4	869.9	901.9	913.1
45°	794.8	807.9	836.1	871.8	886.8
47.5°	753.4	768.5	800.4	841.7	858.7
50°	706.5	725.3	764.7	811.7	830.5
52.5°	661.4	683.9	727.1	779.7	804.2
55°	614.4	636.9	693.3	747.8	774.1
57.5°	561.8	591.9	653.9	715.9	744.0
60°	512.9	541.1	616.3	683.9	712.1
62.5°	460.3	497.9	578.7	650.1	678.3
65°	405.8	447.2	539.2	610.6	638.8
67.5°	357.0	402.1	499.8	571.2	599.4
70°	298.7	355.1	456.6	528.0	556.2
72.5°	244.3	306.3	411.5	481.0	507.3
75°	191.6	261.2	364.5	426.5	439.7
77.5°	142.8	216.1	315.7	342.0	332.6
80°	101.5	172.9	246.1	233.0	238.6
82.5°	65.8	131.5	152.2	172.9	178.5
85°	37.6	77.0	93.9	101.5	105.2
87.5°	16.9	28.2	37.6	37.6	35.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)