

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: P310489

Luminaire Tested: **24FCZ2-75HE-UNV-L82765-RDP-CP250-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: P310489
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: 24FCZ2-75HE-UNV-L82765-RDP-CP250-W2A-U-6500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.250" 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: 4496.0 lumens
Efficiency: N/A
Efficacy: 68.5 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

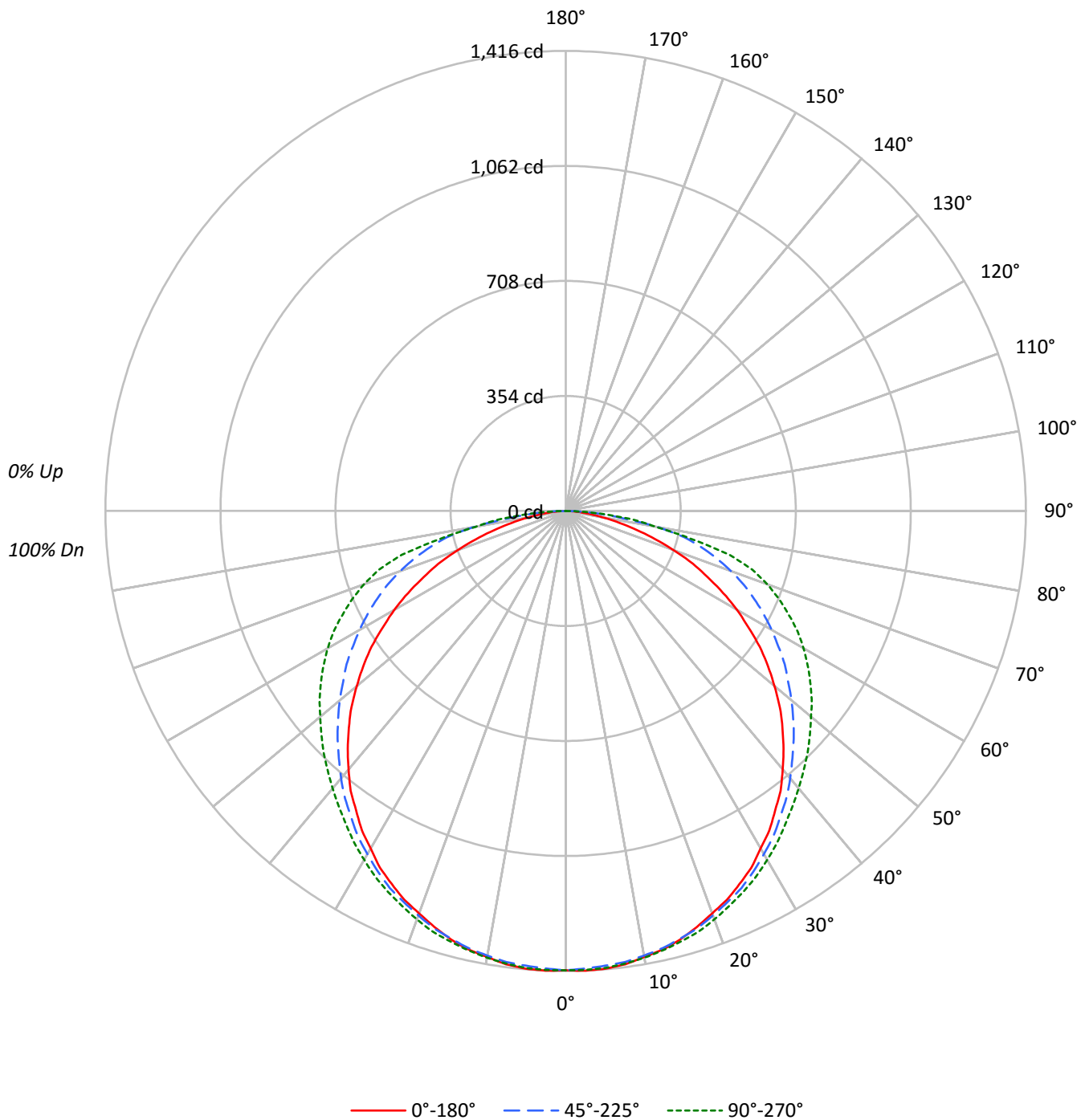
Input Watts (W): 65.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
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°	1902	1902	1902
5°	1910	1897	1907
10°	1904	1898	1907
15°	1901	1898	1910
20°	1887	1897	1916
25°	1881	1900	1920
30°	1864	1895	1926
35°	1846	1890	1934
40°	1825	1888	1958
45°	1795	1888	2003
50°	1755	1900	2063
55°	1711	1930	2155
60°	1638	1968	2274
65°	1534	2038	2414
70°	1395	2132	2597
75°	1183	2249	2713
80°	933	2263	2194
85°	689	1721	1928



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	134.1	3.0
10°-20°	386.0	8.6
20°-30°	590.3	13.1
30°-40°	721.6	16.0
40°-50°	769.1	17.1
50°-60°	735.3	16.4
60°-70°	622.9	13.9
70°-80°	418.7	9.3
80°-90°	118.1	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°	1110.4	24.7
0°-40°	1832.0	40.7
0°-60°	3336.4	74.2
0°-90°	4496.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4496.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1414	1414	1414	1414	1414	
5°	1414	1412	1405	1412	1412	134
15°	1365	1365	1363	1374	1372	385
25°	1267	1271	1280	1291	1293	584
35°	1124	1133	1151	1173	1178	704
45°	943	959	992	1035	1053	728
55°	729	756	823	888	919	649
65°	482	531	640	725	758	478
75°	228	310	433	506	522	244
85°	45	91	112	120	125	55
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1413.9	1413.9	1413.9	1413.9	1413.9
2.5°	1416.1	1416.1	1409.4	1413.9	1413.9
5°	1413.9	1411.6	1404.9	1411.6	1411.6
7.5°	1407.2	1404.9	1400.5	1407.2	1404.9
10°	1393.8	1393.8	1389.3	1396.0	1396.0
12.5°	1382.6	1380.4	1378.2	1387.1	1384.9
15°	1364.8	1364.8	1362.6	1373.7	1371.5
17.5°	1342.5	1344.7	1347.0	1355.9	1358.1
20°	1318.0	1322.4	1324.7	1338.0	1338.0
22.5°	1295.7	1297.9	1302.4	1315.7	1315.7
25°	1266.7	1271.1	1280.1	1291.2	1293.4
27.5°	1237.7	1239.9	1251.1	1266.7	1268.9
30°	1199.8	1206.5	1219.8	1237.7	1239.9
32.5°	1166.3	1173.0	1188.6	1206.5	1210.9
35°	1124.0	1132.9	1150.7	1173.0	1177.5
37.5°	1086.0	1092.7	1115.0	1139.6	1146.3
40°	1039.2	1052.6	1074.9	1103.9	1115.0
42.5°	992.4	1005.8	1032.5	1070.4	1083.8
45°	943.3	958.9	992.4	1034.8	1052.6
47.5°	894.3	912.1	950.0	999.1	1019.1
50°	838.5	860.8	907.6	963.4	985.7
52.5°	785.0	811.7	863.0	925.5	954.5
55°	729.2	756.0	822.9	887.6	918.8
57.5°	666.8	702.5	776.1	849.7	883.1
60°	608.8	642.3	731.5	811.7	845.2
62.5°	546.4	591.0	686.9	771.6	805.1
65°	481.7	530.8	640.0	724.8	758.2
67.5°	423.7	477.2	593.2	677.9	711.4
70°	354.6	421.5	541.9	626.6	660.1
72.5°	289.9	363.5	488.4	570.9	602.1
75°	227.5	310.0	432.6	506.2	521.8
77.5°	169.5	256.5	374.7	405.9	394.7
80°	120.4	205.2	292.1	276.5	283.2
82.5°	78.1	156.1	180.6	205.2	211.9
85°	44.6	91.4	111.5	120.4	124.9
87.5°	20.1	33.5	44.6	44.6	42.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)