

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: P309724

Luminaire Tested: **24FCZ2-65HE-UNV-L82765-HRP-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: P309724
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: 24FCZ2-65HE-UNV-L82765-HRP-CP250-W2A-U-6500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 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: 4398.0 lumens
Efficiency: N/A
Efficacy: 80.1 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

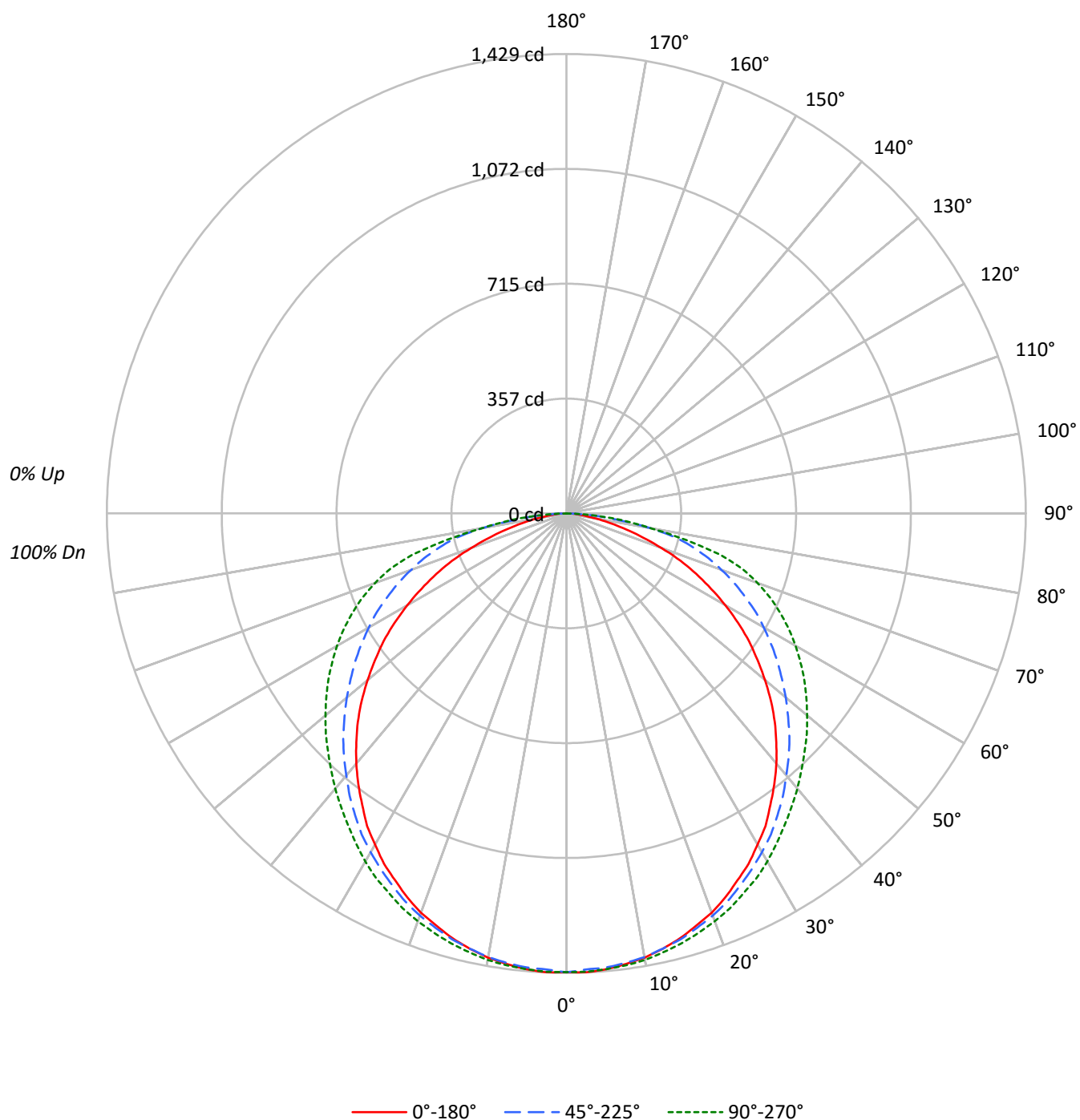
Input Watts (W): 54.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1920	1920	1920
5°	1922	1915	1922
10°	1917	1914	1927
15°	1906	1911	1929
20°	1893	1906	1932
25°	1870	1897	1935
30°	1848	1891	1942
35°	1818	1881	1945
40°	1785	1869	1963
45°	1745	1867	1993
50°	1688	1865	2047
55°	1628	1879	2121
60°	1536	1908	2215
65°	1419	1952	2339
70°	1238	2021	2492
75°	1005	2125	2575
80°	742	2083	2083
85°	568	1535	1734



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	135.2	3.1
10°-20°	388.2	8.8
20°-30°	590.9	13.4
30°-40°	717.6	16.3
40°-50°	758.1	17.2
50°-60°	715.3	16.3
60°-70°	594.8	13.5
70°-80°	391.3	8.9
80°-90°	106.7	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°	1114.3	25.3
0°-40°	1831.8	41.7
0°-60°	3305.3	75.2
0°-90°	4398.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4398.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1427	1427	1427	1427	1427	
5°	1423	1423	1418	1423	1423	135
15°	1368	1370	1372	1385	1385	386
25°	1259	1267	1278	1300	1304	581
35°	1107	1120	1145	1175	1184	693
45°	917	935	981	1029	1048	706
55°	694	724	801	876	904	618
65°	446	497	613	703	735	440
75°	193	282	409	484	495	208
85°	37	81	99	110	112	45
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1426.9	1426.9	1426.9	1426.9	1426.9
2.5°	1428.8	1426.9	1419.6	1426.9	1426.9
5°	1423.3	1423.3	1417.7	1423.3	1423.3
7.5°	1414.0	1414.0	1410.4	1417.7	1417.7
10°	1403.0	1403.0	1401.2	1410.4	1410.4
12.5°	1386.4	1388.3	1386.4	1397.5	1397.5
15°	1368.0	1369.9	1371.7	1384.6	1384.6
17.5°	1344.1	1347.8	1351.4	1366.2	1368.0
20°	1322.0	1323.8	1331.2	1347.8	1349.6
22.5°	1292.5	1298.1	1307.3	1323.8	1329.4
25°	1259.4	1266.7	1277.8	1299.9	1303.6
27.5°	1228.1	1233.6	1248.3	1272.3	1279.6
30°	1189.4	1198.6	1217.0	1241.0	1250.2
32.5°	1152.6	1161.8	1183.9	1209.7	1217.0
35°	1106.6	1119.5	1145.2	1174.7	1183.9
37.5°	1062.4	1075.3	1106.6	1139.7	1150.8
40°	1016.3	1031.1	1064.2	1102.9	1117.6
42.5°	966.6	986.9	1023.7	1066.1	1082.6
45°	916.9	935.3	981.4	1029.2	1047.6
47.5°	863.5	885.6	935.3	992.4	1014.5
50°	806.4	834.1	891.1	953.7	977.7
52.5°	749.4	780.7	845.1	915.1	940.9
55°	694.1	723.6	800.9	876.4	904.0
57.5°	633.4	670.2	754.9	835.9	863.5
60°	570.8	611.3	708.9	793.6	823.0
62.5°	508.2	554.2	664.7	749.4	780.7
65°	445.6	497.1	613.1	703.3	734.6
67.5°	384.8	441.9	565.3	655.5	686.8
70°	314.8	386.7	513.7	602.1	633.4
72.5°	250.4	333.3	464.0	546.8	574.5
75°	193.3	281.7	408.7	484.2	495.3
77.5°	141.8	230.2	351.7	377.4	379.3
80°	95.7	184.1	268.8	265.1	268.8
82.5°	62.6	138.1	169.4	189.6	191.5
85°	36.8	81.0	99.4	110.5	112.3
87.5°	18.4	27.6	35.0	36.8	40.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)