

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: METALUX

Report Number: P859870

Luminaire Tested: **SPHB-12SE-N-L940-CD**

Issue Date: 7/11/2024

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: P859870
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2404-343-7)
Test Lab: INNOVATION CENTER
Issue Date: 7/11/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: SPHB-12SE-N-L940-CD
Description: 12000 Lumen Standard Efficacy Select Pro High Bay with Narrow Lens and, 4000K 90CRI LEDs
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

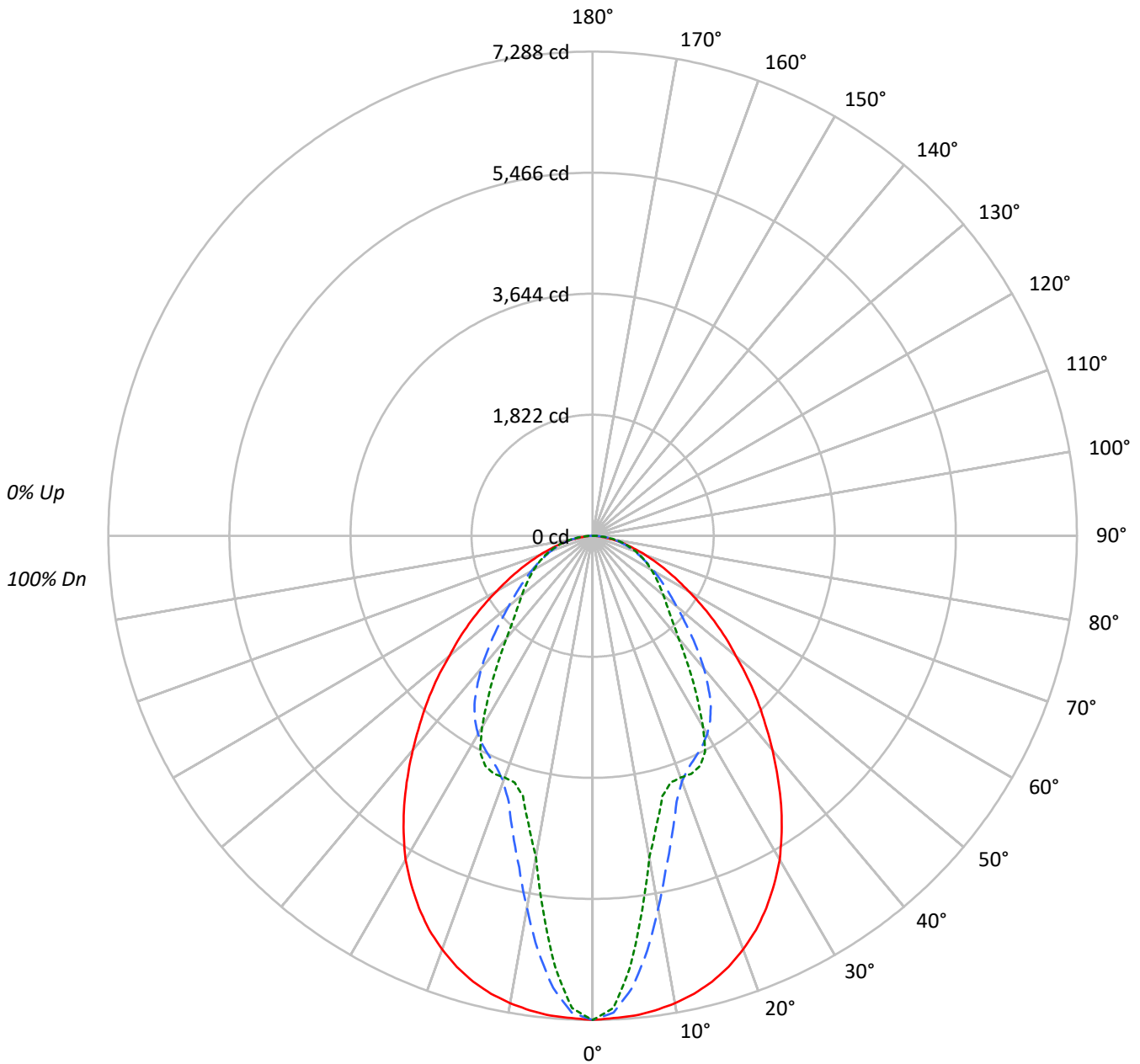
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10681.0 lumens
Efficiency: N/A
Efficacy: 140.0 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.54 / 0.94
Luminous Opening: Rectangular (W 1' x L: 1.38' x H: 0')
CIE Type: Direct

Input Watts (W): 76.3
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									
RC	80									50									30									10									0
RW	70	50	30	10	70	50	30	10	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	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86																			
2	101	94	88	83	99	92	86	82	88	84	80	85	81	78	82	79	76	74																			
3	93	84	76	71	91	82	75	70	79	73	69	77	72	68	74	70	66	64																			
4	86	75	67	61	84	74	67	61	72	65	60	69	64	59	67	62	58	56																			
5	80	68	60	54	78	67	59	54	65	58	53	63	57	53	61	56	52	50																			
6	74	62	54	48	73	61	54	48	60	53	47	58	52	47	56	51	47	45																			
7	70	57	49	43	68	56	49	43	55	48	43	53	47	43	52	46	42	40																			
8	65	53	45	39	64	52	44	39	51	44	39	49	43	39	48	43	38	37																			
9	61	49	41	36	60	48	41	36	47	40	36	46	40	35	45	39	35	34																			
10	58	45	38	33	56	45	38	33	44	37	33	43	37	33	42	37	33	31																			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	56844	56844	56844
5°	56779	53486	50954
10°	56585	45084	38866
15°	56114	37424	32752
20°	54983	32623	32151
25°	53216	31564	32904
30°	50701	31058	29945
35°	47076	29513	24814
40°	42867	26495	20490
45°	38695	22989	17988
50°	34148	19990	16844
55°	30301	18029	16214
60°	25968	16673	15882
65°	22478	15669	15802
70°	19236	15074	15784
75°	16147	14637	15644
80°	12321	14145	15322
85°	8063	12547	11804



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	621.3	5.8
10°-20°	1426.7	13.4
20°-30°	1928.1	18.1
30°-40°	2029.2	19.0
40°-50°	1721.9	16.1
50°-60°	1333.8	12.5
60°-70°	929.0	8.7
70°-80°	532.0	5.0
80°-90°	154.8	1.4
90°-100°	4.1	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°	3976.2	37.2
0°-40°	6005.4	56.2
0°-60°	9061.1	84.8
0°-90°	10676.9	100.0
90°-120°	4.1	0.0
90°-150°	4.1	0.0
90°-180°	4.0	0.0
0°-180°	10681.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	7288	7288	7288	7288	7288	
5°	7252	7119	6831	6569	6508	689
15°	6949	5898	4634	4172	4056	1955
25°	6183	4368	3668	3774	3823	2839
35°	4944	3359	3100	2800	2606	3082
45°	3508	2523	2084	1712	1631	2702
55°	2228	1699	1326	1205	1192	1992
65°	1218	997	849	849	856	1217
75°	536	476	486	516	519	571
85°	90	117	140	132	132	115
90°	1	11	21	26	27	5
95°	1	2	3	3	3	0
105°	0	0	0	0	0	0
115°	0	0	0	0	0	0
125°	0	0	0	0	0	0
135°	0	0	0	0	0	0
145°	0	0	0	0	0	0
155°	0	0	0	0	0	0
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



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CATALOG NUMBER: SPHB-12SE-N-L940-CD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	7287.8	7287.8	7287.8	7287.8	7287.8
2.5°	7266.7	7242.8	7184.3	7146.5	7117.0
5°	7251.7	7118.7	6831.1	6569.0	6507.8
7.5°	7206.6	6914.5	6299.7	5815.1	5692.7
10°	7144.3	6621.3	5692.2	5085.2	4907.1
12.5°	7061.4	6308.1	5110.2	4538.3	4450.9
15°	6949.0	5898.0	4634.5	4171.6	4055.9
17.5°	6803.2	5474.1	4195.6	3927.9	3895.7
20°	6624.1	5085.2	3930.2	3838.9	3873.4
22.5°	6422.7	4707.4	3776.1	3814.4	3879.0
25°	6183.4	4368.0	3667.6	3773.8	3823.3
27.5°	5914.7	4061.5	3568.0	3665.3	3665.3
30°	5629.3	3806.1	3448.4	3439.5	3324.8
32.5°	5296.0	3589.1	3292.0	3115.6	2945.4
35°	4943.9	3359.3	3099.5	2799.6	2606.0
37.5°	4574.4	3145.7	2855.8	2460.2	2280.0
40°	4210.0	2934.8	2602.1	2155.4	2012.4
42.5°	3847.3	2720.1	2337.8	1908.3	1795.4
45°	3507.9	2522.6	2084.1	1712.5	1630.7
47.5°	3162.9	2312.8	1849.9	1555.0	1498.3
50°	2814.1	2100.3	1647.4	1429.9	1388.1
52.5°	2520.3	1902.2	1475.5	1311.4	1286.3
55°	2228.2	1699.1	1325.8	1205.1	1192.3
57.5°	1938.4	1510.0	1189.0	1107.7	1104.9
60°	1664.6	1333.1	1068.8	1024.3	1018.1
62.5°	1431.5	1157.2	954.7	933.6	936.4
65°	1217.9	997.0	849.0	849.0	856.2
67.5°	1019.8	849.6	752.2	765.0	775.0
70°	843.5	716.0	661.0	683.2	692.1
72.5°	676.5	592.0	573.6	598.1	605.3
75°	535.8	476.2	485.7	516.3	519.1
77.5°	397.2	375.0	399.5	432.9	439.0
80°	274.3	276.5	314.9	338.3	341.1
82.5°	176.9	193.1	235.9	248.1	243.7
85°	90.1	116.8	140.2	131.9	131.9
87.5°	34.5	50.6	59.5	70.1	74.0
90°	0.6	10.6	20.6	26.1	27.3
92.5°	0.6	2.8	4.5	5.0	4.5
95°	0.6	1.7	3.3	3.3	2.8
97.5°	0.0	0.0	0.0	0.0	0.0
100°	0.0	0.0	0.0	0.0	0.0
102.5°	0.0	0.0	0.0	0.0	0.0
105°	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.0	0.0	0.0	0.0	0.0
115°	0.0	0.0	0.0	0.0	0.0
117.5°	0.0	0.0	0.0	0.0	0.0
120°	0.0	0.0	0.0	0.0	0.0
122.5°	0.0	0.0	0.0	0.0	0.0
125°	0.0	0.0	0.0	0.0	0.0
127.5°	0.0	0.0	0.0	0.0	0.0
130°	0.0	0.0	0.0	0.0	0.0
132.5°	0.0	0.0	0.0	0.0	0.0
135°	0.0	0.0	0.0	0.0	0.0
137.5°	0.0	0.0	0.0	0.0	0.0
140°	0.0	0.0	0.0	0.0	0.0
142.5°	0.0	0.0	0.0	0.0	0.0
145°	0.0	0.0	0.0	0.0	0.0
147.5°	0.0	0.0	0.0	0.0	0.0
150°	0.0	0.0	0.0	0.0	0.0
152.5°	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0
157.5°	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0



Report Generated By 670246072 / DESKTOP-50001EG





— 0°-180° - - 45°-225° - - - - 90°-270°







107.5°	0.0	0.0	0.0	0.0	0.0
110°	0.0	0.0	0.0	0.0	0.0



(END OF REPORT)