

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P997559

Luminaire Tested: SA2XXDP-B1005DB40-4F0-XX-W2A-D

Issue Date: 5/2/2025

Test Information

Test Method: LM-79-2019
Report Number: P997559
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-14)
Test Lab: INNOVATION CENTER
Issue Date: 5/2/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: SA2XXDP-B1005DB40-4F0-XX-W2A-D
Description: Define 2 Direct Recessed with 4000K BioUP LEDs {m-DER=0.865} {m-EER=0.951}
Light Source: -
Ballast/Driver: -

Summary

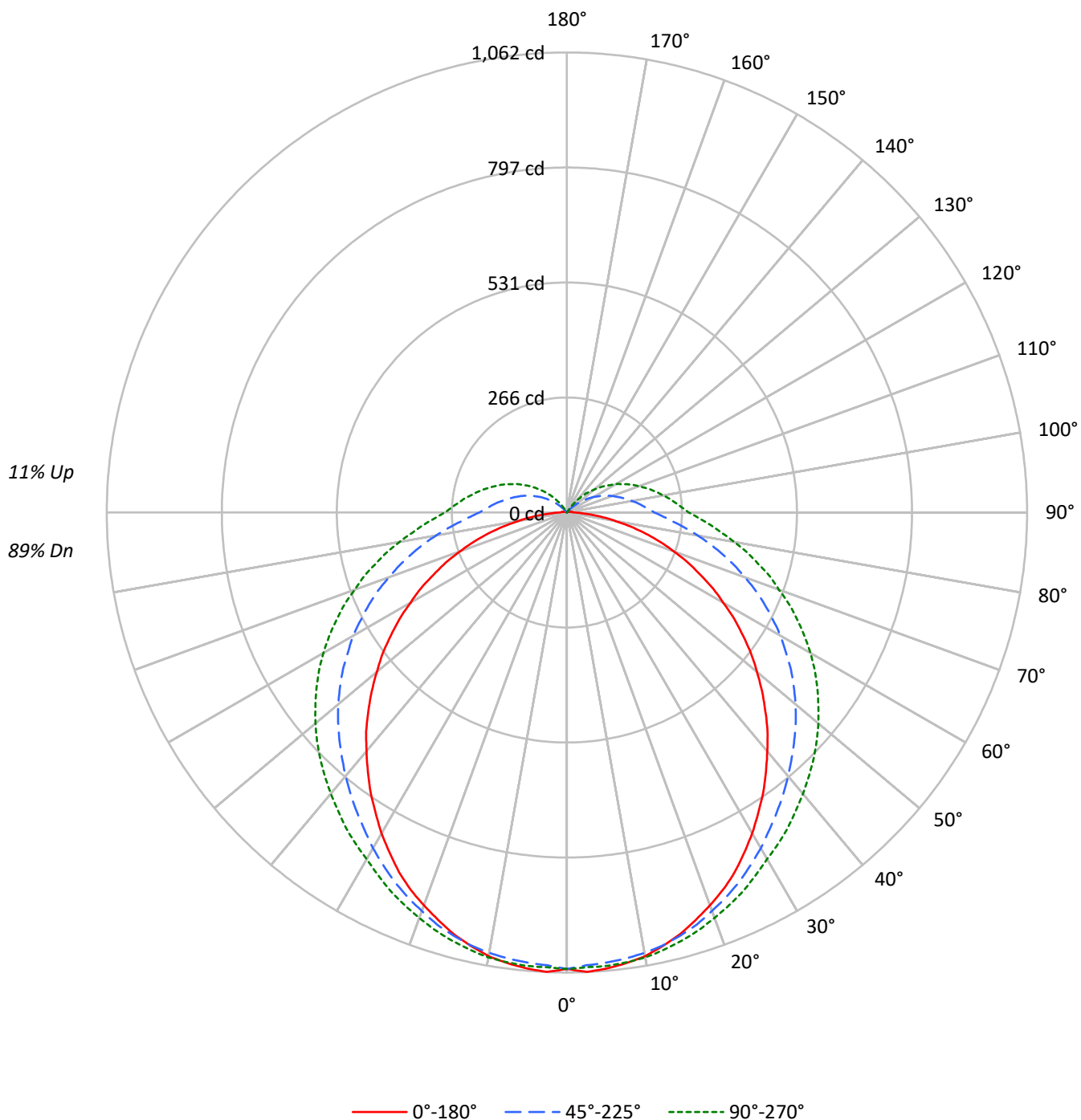
Lumens per Lamp: N/A
Luminaire Lumens: 4021.0 lumens
Efficiency: N/A
Efficacy: 65.6 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.31 / 1.42
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 61.3
Input Voltage (V):
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: 24 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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	116	116	116	116	112	112	112	112	105	105	105	98	98	98	92	92	92
1	104	98	93	88	100	95	90	86	88	85	81	82	79	77	77	75	72
2	94	84	77	70	90	81	74	68	76	70	65	71	66	62	66	62	59
3	85	73	64	57	81	71	63	56	66	59	54	62	56	51	58	53	49
4	77	64	55	48	74	62	54	47	58	51	45	55	48	43	51	46	42
5	71	57	48	41	68	56	47	40	52	44	39	49	42	37	46	40	36
6	65	51	42	35	63	50	41	35	47	39	34	44	37	32	42	36	31
7	60	46	37	31	58	45	37	31	43	35	30	40	34	29	38	32	28
8	56	42	34	28	54	41	33	27	39	32	26	37	30	25	35	29	25
9	52	39	30	25	50	38	30	24	36	29	24	34	27	23	32	26	22
10	49	36	28	22	47	35	27	22	33	26	21	31	25	21	30	24	20

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	16681	16681	16681
5°	16794	16575	16697
10°	16718	16594	16766
15°	16519	16570	16770
20°	16259	16491	16774
25°	16006	16432	16832
30°	15633	16359	16889
35°	15258	16321	17177
40°	14863	16411	17515
45°	14497	16617	18018
50°	14103	16962	18654
55°	13699	17409	19473
60°	13198	18036	20550
65°	12701	18877	21968
70°	12158	20216	24104
75°	11492	22696	27932
80°	10438	27985	35779
85°	9989	44933	60462

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°

Vertical Angle: 87.5°

Luminance: 110865 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	99.9	2.5
10°-20°	286.5	7.1
20°-30°	434.1	10.8
30°-40°	528.7	13.1
40°-50°	568.8	14.1
50°-60°	552.4	13.7
60°-70°	482.4	12.0
70°-80°	371.3	9.2
80°-90°	248.7	6.2
90°-100°	171.6	4.3
100°-110°	125.3	3.1
110°-120°	82.7	2.1
120°-130°	46.1	1.1
130°-140°	19.4	0.5
140°-150°	3.3	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	820.6	20.4
0°-40°	1349.2	33.6
0°-60°	2470.4	61.4
0°-90°	3572.7	88.9
90°-120°	379.6	9.4
90°-150°	448.3	11.1
90°-180°	448.0	11.1
0°-180°	4021.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1054	1054	1054	1054	1054	
5°	1057	1052	1043	1052	1051	100
15°	1008	1011	1011	1025	1023	284
25°	916	927	941	959	964	421
35°	790	816	845	878	889	494
45°	648	689	742	790	805	500
55°	496	551	631	686	706	444
65°	339	414	504	567	586	337
75°	188	273	371	437	457	199
85°	55	150	247	312	333	58
90°	15	104	202	263	281	11
95°	12	84	176	234	252	10
105°	8	52	131	185	202	9
115°	6	23	92	138	154	6
125°	3	3	52	93	107	3
135°	2	2	17	49	61	2
145°	0	0	0	9	17	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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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1053.8	1053.8	1053.8	1053.8	1053.8
2.5°	1061.5	1056.9	1046.2	1053.8	1050.8
5°	1056.9	1052.3	1043.1	1052.3	1050.8
7.5°	1049.2	1046.2	1038.5	1049.2	1047.7
10°	1040.1	1037.0	1032.4	1044.7	1043.1
12.5°	1024.8	1026.3	1023.3	1035.5	1034.0
15°	1008.0	1011.1	1011.1	1024.8	1023.3
17.5°	986.6	992.7	997.3	1011.1	1011.1
20°	965.2	972.9	979.0	995.8	995.8
22.5°	942.3	951.5	960.7	977.5	980.5
25°	916.4	927.1	940.8	959.1	963.7
27.5°	885.8	902.6	917.9	940.8	943.9
30°	855.3	875.1	895.0	919.4	924.0
32.5°	821.7	844.6	869.0	898.0	907.2
35°	789.6	815.6	844.6	878.2	888.9
37.5°	754.5	783.5	820.1	856.8	867.5
40°	719.3	752.9	794.2	833.9	847.6
42.5°	685.7	719.3	768.2	812.5	826.3
45°	647.6	688.8	742.3	789.6	804.9
47.5°	610.9	655.2	716.3	765.2	782.0
50°	572.7	620.1	688.8	740.7	757.5
52.5°	536.1	586.5	659.8	713.2	731.6
55°	496.4	551.3	630.8	685.7	705.6
57.5°	458.2	519.3	598.7	658.3	678.1
60°	416.9	482.6	569.7	627.7	649.1
62.5°	380.3	449.0	536.1	598.7	618.5
65°	339.1	413.9	504.0	566.6	586.5
67.5°	302.4	380.3	471.9	534.5	555.9
70°	262.7	342.1	436.8	502.5	520.8
72.5°	226.0	308.5	404.7	468.9	491.8
75°	187.9	273.4	371.1	436.8	456.7
77.5°	151.2	239.8	339.1	404.7	426.1
80°	114.5	207.7	307.0	371.1	392.5
82.5°	84.0	175.6	276.4	340.6	360.4
85°	55.0	149.7	247.4	311.6	332.9
87.5°	33.6	125.2	223.0	285.6	305.5
90°	15.3	103.9	201.6	262.7	281.0
92.5°	13.7	94.7	187.9	247.4	265.7
95°	12.2	84.0	175.6	233.7	252.0
97.5°	10.7	76.4	164.9	221.5	239.8
100°	10.7	67.2	152.7	209.2	226.0
102.5°	9.2	59.6	142.0	197.0	213.8
105°	7.6	51.9	131.3	184.8	201.6
107.5°	7.6	44.3	120.7	172.6	189.4
110°	6.1	36.7	111.5	160.4	177.2



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	6.1	30.5	100.8	149.7	166.5
115°	6.1	22.9	91.6	137.5	154.3
117.5°	4.6	16.8	80.9	126.8	142.0
120°	4.6	10.7	71.8	114.5	131.3
122.5°	4.6	6.1	62.6	103.9	117.6
125°	3.1	3.1	51.9	93.2	106.9
127.5°	3.1	1.5	42.8	80.9	94.7
130°	3.1	1.5	33.6	70.3	82.5
132.5°	3.1	1.5	24.4	59.6	71.8
135°	1.5	1.5	16.8	48.9	61.1
137.5°	1.5	1.5	9.2	38.2	48.9
140°	1.5	0.0	3.1	27.5	36.7
142.5°	1.5	0.0	0.0	18.3	26.0
145°	0.0	0.0	0.0	9.2	16.8
147.5°	0.0	0.0	0.0	1.5	6.1
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

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CIE UGR TABLE:

Reflectances:											
Ceiling		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference plane		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		Viewed crosswise					Viewed endwise				
X=2H	Y=2H	20.17	21.65	20.69	22.18	22.76	22.02	23.50	22.55	24.03	24.61
	3H	22.05	23.40	22.59	23.94	24.56	24.68	26.03	25.22	26.57	27.19
	4H	22.78	24.06	23.34	24.62	25.25	25.98	27.27	26.54	27.82	28.45
	6H	23.34	24.54	23.91	25.10	25.75	27.36	28.56	27.93	29.12	29.77
	8H	23.53	24.68	24.12	25.27	25.92	28.08	29.23	28.66	29.82	30.47
	12H	23.68	24.78	24.27	25.37	26.05	28.90	30.00	29.49	30.58	31.26
4H	2H	21.29	22.58	21.85	23.13	23.76	22.65	23.93	23.21	24.49	25.11
	3H	23.47	24.57	24.04	25.16	25.81	25.58	26.69	26.16	27.28	27.93
	4H	24.39	25.40	24.98	26.00	26.68	27.10	28.11	27.69	28.71	29.40
	6H	25.14	26.03	25.75	26.66	27.35	28.70	29.59	29.31	30.22	30.91
	8H	25.42	26.26	26.03	26.89	27.59	29.54	30.38	30.15	31.01	31.71
	12H	25.64	26.41	26.28	27.06	27.77	30.50	31.26	31.13	31.92	32.63
8H	4H	25.32	26.16	25.93	26.79	27.49	27.51	28.35	28.12	28.98	29.68
	6H	26.38	27.09	27.02	27.76	28.47	29.36	30.08	30.01	30.75	31.46
	8H	26.84	27.48	27.49	28.16	28.88	30.40	31.05	31.06	31.73	32.45
	12H	27.24	27.82	27.90	28.48	29.27	31.61	32.19	32.27	32.86	33.64
12H	4H	25.58	26.35	26.22	27.00	27.71	27.56	28.33	28.20	28.98	29.69
	6H	26.81	27.46	27.47	28.13	28.85	29.49	30.14	30.15	30.82	31.54
	8H	27.43	28.01	28.09	28.67	29.46	30.65	31.22	31.31	31.89	32.67