

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: P997589

Luminaire Tested: SA2XXDP-B290DB40-4F0-XX-W2A-D

Issue Date: 5/2/2025

Test Information

Test Method: LM-79-2019
Report Number: P997589
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-B290DB40-4F0-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

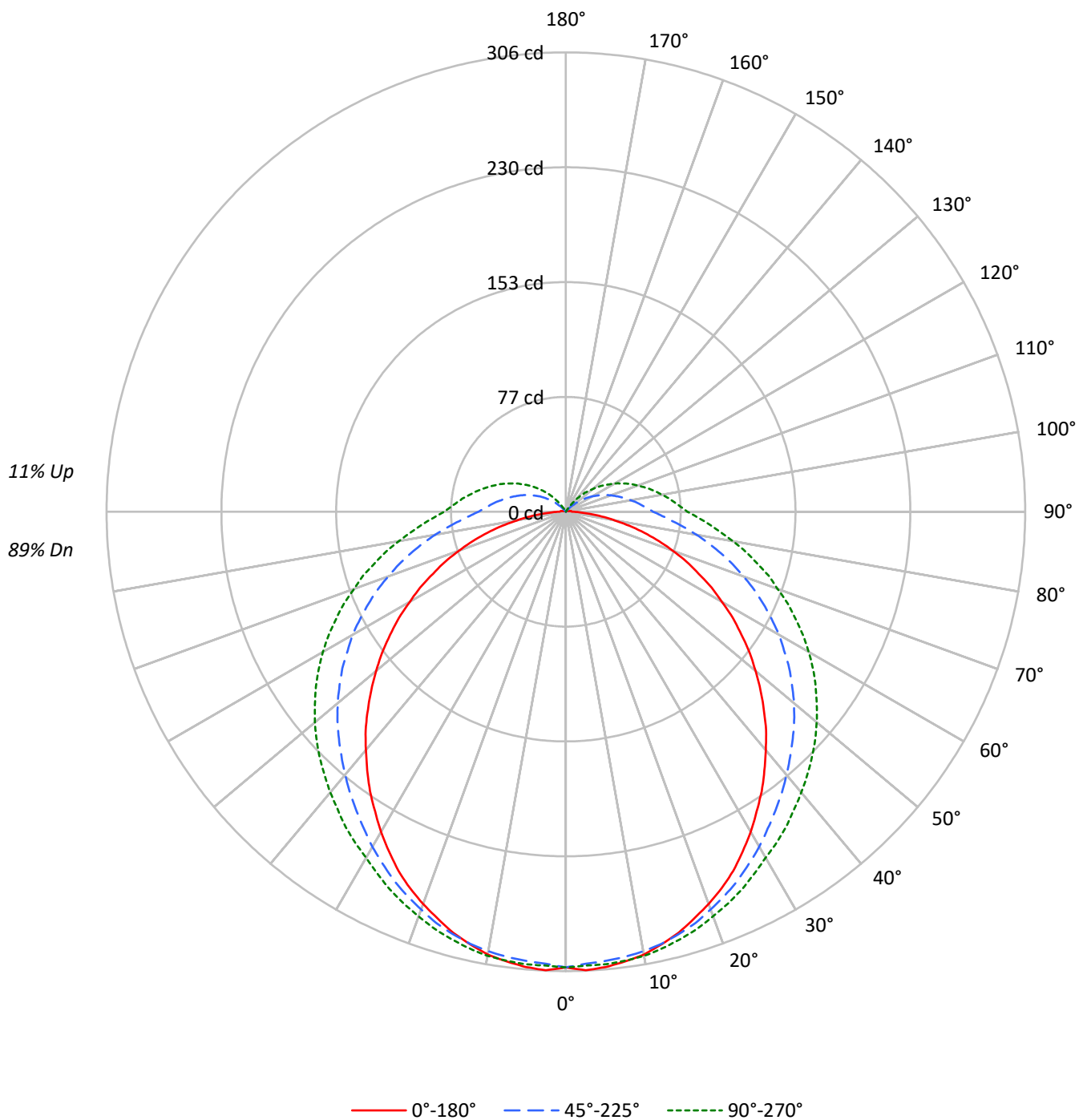
Lumens per Lamp: N/A
Luminaire Lumens: 1158.0 lumens
Efficiency: N/A
Efficacy: 89.1 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.31 / 1.42
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 13
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

TEST NUMBER: P997589

CATALOG NUMBER: SA2XXDP-B290DB40-4F0-XX-W2A-D

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°	4804	4804	4804
5°	4837	4773	4808
10°	4814	4779	4828
15°	4757	4772	4829
20°	4683	4749	4831
25°	4609	4731	4847
30°	4502	4710	4864
35°	4394	4700	4947
40°	4282	4726	5044
45°	4175	4786	5189
50°	4061	4886	5373
55°	3944	5014	5608
60°	3802	5195	5917
65°	3656	5435	6326
70°	3504	5822	6942
75°	3309	6538	8042
80°	3008	8058	10301
85°	2870	12950	17417

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°

Vertical Angle: 87.5°

Luminance: 31935 cd/sqm

TEST NUMBER: P997589

CATALOG NUMBER: SA2XXDP-B290DB40-4F0-XX-W2A-D

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	28.8	2.5
10°-20°	82.5	7.1
20°-30°	125.0	10.8
30°-40°	152.2	13.1
40°-50°	163.8	14.1
50°-60°	159.1	13.7
60°-70°	138.9	12.0
70°-80°	106.9	9.2
80°-90°	71.6	6.2
90°-100°	49.4	4.3
100°-110°	36.1	3.1
110°-120°	23.8	2.1
120°-130°	13.3	1.1
130°-140°	5.6	0.5
140°-150°	0.9	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	236.3	20.4
0°-40°	388.5	33.6
0°-60°	711.5	61.4
0°-90°	1028.9	88.9
90°-120°	109.3	9.4
90°-150°	129.1	11.1
90°-180°	129.0	11.1
0°-180°	1158.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	304	304	304	304	304	
5°	304	303	300	303	303	29
15°	290	291	291	295	295	82
25°	264	267	271	276	278	121
35°	227	235	243	253	256	142
45°	186	198	214	227	232	144
55°	143	159	182	198	203	128
65°	98	119	145	163	169	97
75°	54	79	107	126	132	57
85°	16	43	71	90	96	17
90°	4	30	58	76	81	3
95°	4	24	51	67	73	3
105°	2	15	38	53	58	3
115°	2	7	26	40	44	2
125°	1	1	15	27	31	1
135°	0	0	5	14	18	0
145°	0	0	0	3	5	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

TEST NUMBER: P997589

CATALOG NUMBER: SA2XXDP-B290DB40-4F0-XX-W2A-D

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	303.5	303.5	303.5	303.5	303.5
2.5°	305.7	304.4	301.3	303.5	302.6
5°	304.4	303.0	300.4	303.0	302.6
7.5°	302.2	301.3	299.1	302.2	301.7
10°	299.5	298.6	297.3	300.8	300.4
12.5°	295.1	295.6	294.7	298.2	297.8
15°	290.3	291.2	291.2	295.1	294.7
17.5°	284.1	285.9	287.2	291.2	291.2
20°	278.0	280.2	281.9	286.8	286.8
22.5°	271.4	274.0	276.7	281.5	282.4
25°	263.9	267.0	270.9	276.2	277.5
27.5°	255.1	259.9	264.3	270.9	271.8
30°	246.3	252.0	257.7	264.8	266.1
32.5°	236.6	243.2	250.3	258.6	261.3
35°	227.4	234.9	243.2	252.9	256.0
37.5°	217.3	225.6	236.2	246.7	249.8
40°	207.2	216.8	228.7	240.2	244.1
42.5°	197.5	207.2	221.2	234.0	238.0
45°	186.5	198.4	213.8	227.4	231.8
47.5°	175.9	188.7	206.3	220.4	225.2
50°	164.9	178.6	198.4	213.3	218.2
52.5°	154.4	168.9	190.0	205.4	210.7
55°	142.9	158.8	181.7	197.5	203.2
57.5°	132.0	149.5	172.4	189.6	195.3
60°	120.1	139.0	164.1	180.8	186.9
62.5°	109.5	129.3	154.4	172.4	178.1
65°	97.6	119.2	145.1	163.2	168.9
67.5°	87.1	109.5	135.9	153.9	160.1
70°	75.7	98.5	125.8	144.7	150.0
72.5°	65.1	88.8	116.6	135.0	141.6
75°	54.1	78.7	106.9	125.8	131.5
77.5°	43.5	69.1	97.6	116.6	122.7
80°	33.0	59.8	88.4	106.9	113.0
82.5°	24.2	50.6	79.6	98.1	103.8
85°	15.8	43.1	71.3	89.7	95.9
87.5°	9.7	36.1	64.2	82.2	88.0
90°	4.4	29.9	58.1	75.7	80.9
92.5°	4.0	27.3	54.1	71.3	76.5
95°	3.5	24.2	50.6	67.3	72.6
97.5°	3.1	22.0	47.5	63.8	69.1
100°	3.1	19.4	44.0	60.3	65.1
102.5°	2.6	17.2	40.9	56.7	61.6
105°	2.2	15.0	37.8	53.2	58.1
107.5°	2.2	12.8	34.7	49.7	54.5
110°	1.8	10.6	32.1	46.2	51.0



TEST NUMBER: P997589

CATALOG NUMBER: SA2XXDP-B290DB40-4F0-XX-W2A-D

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	1.8	8.8	29.0	43.1	47.9
115°	1.8	6.6	26.4	39.6	44.4
117.5°	1.3	4.8	23.3	36.5	40.9
120°	1.3	3.1	20.7	33.0	37.8
122.5°	1.3	1.8	18.0	29.9	33.9
125°	0.9	0.9	15.0	26.8	30.8
127.5°	0.9	0.4	12.3	23.3	27.3
130°	0.9	0.4	9.7	20.2	23.8
132.5°	0.9	0.4	7.0	17.2	20.7
135°	0.4	0.4	4.8	14.1	17.6
137.5°	0.4	0.4	2.6	11.0	14.1
140°	0.4	0.0	0.9	7.9	10.6
142.5°	0.4	0.0	0.0	5.3	7.5
145°	0.0	0.0	0.0	2.6	4.8
147.5°	0.0	0.0	0.0	0.4	1.8
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	15.84	17.32	16.37	17.85	18.43	17.69	19.18	18.22	19.70	20.28
	3H	17.72	19.08	18.26	19.61	20.23	20.35	21.71	20.89	22.24	22.86
	4H	18.45	19.74	19.01	20.29	20.92	21.66	22.94	22.22	23.50	24.13
	6H	19.01	20.21	19.58	20.78	21.42	23.03	24.23	23.61	24.80	25.44
	8H	19.21	20.36	19.79	20.95	21.60	23.75	24.90	24.34	25.49	26.14
	12H	19.36	20.46	19.95	21.04	21.72	24.57	25.67	25.16	26.26	26.94
4H	2H	16.97	18.25	17.52	18.80	19.43	18.32	19.61	18.88	20.16	20.79
	3H	19.14	20.24	19.72	20.84	21.49	21.26	22.36	21.83	22.95	23.60
	4H	20.06	21.07	20.65	21.67	22.35	22.78	23.79	23.37	24.39	25.07
	6H	20.81	21.71	21.42	22.33	23.03	24.37	25.27	24.98	25.90	26.59
	8H	21.09	21.94	21.71	22.56	23.27	25.21	26.06	25.83	26.68	27.39
	12H	21.32	22.09	21.95	22.74	23.45	26.17	26.94	26.81	27.59	28.30
8H	4H	20.99	21.83	21.61	22.46	23.17	23.18	24.03	23.80	24.65	25.36
	6H	22.05	22.77	22.70	23.44	24.15	25.04	25.76	25.69	26.42	27.13
	8H	22.51	23.16	23.17	23.83	24.56	26.08	26.73	26.74	27.40	28.12
	12H	22.92	23.49	23.58	24.16	24.94	27.29	27.87	27.95	28.53	29.32
12H	4H	21.26	22.03	21.89	22.68	23.39	23.24	24.01	23.87	24.66	25.37
	6H	22.48	23.13	23.14	23.81	24.53	25.17	25.82	25.83	26.49	27.21
	8H	23.10	23.68	23.76	24.35	25.13	26.32	26.90	26.98	27.56	28.35