

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: P997592

Luminaire Tested: SA2XXDP-B290DB50-4F0-XX-W2A-D

Issue Date: 5/2/2025

Test Information

Test Method: LM-79-2019
Report Number: P997592
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-B290DB50-4F0-XX-W2A-D
Description: Define 2 Direct Recessed with 5000K BioUP LEDs {m-DER=1.015} {m-EER=1.115}
Light Source: -
Ballast/Driver: -

Summary

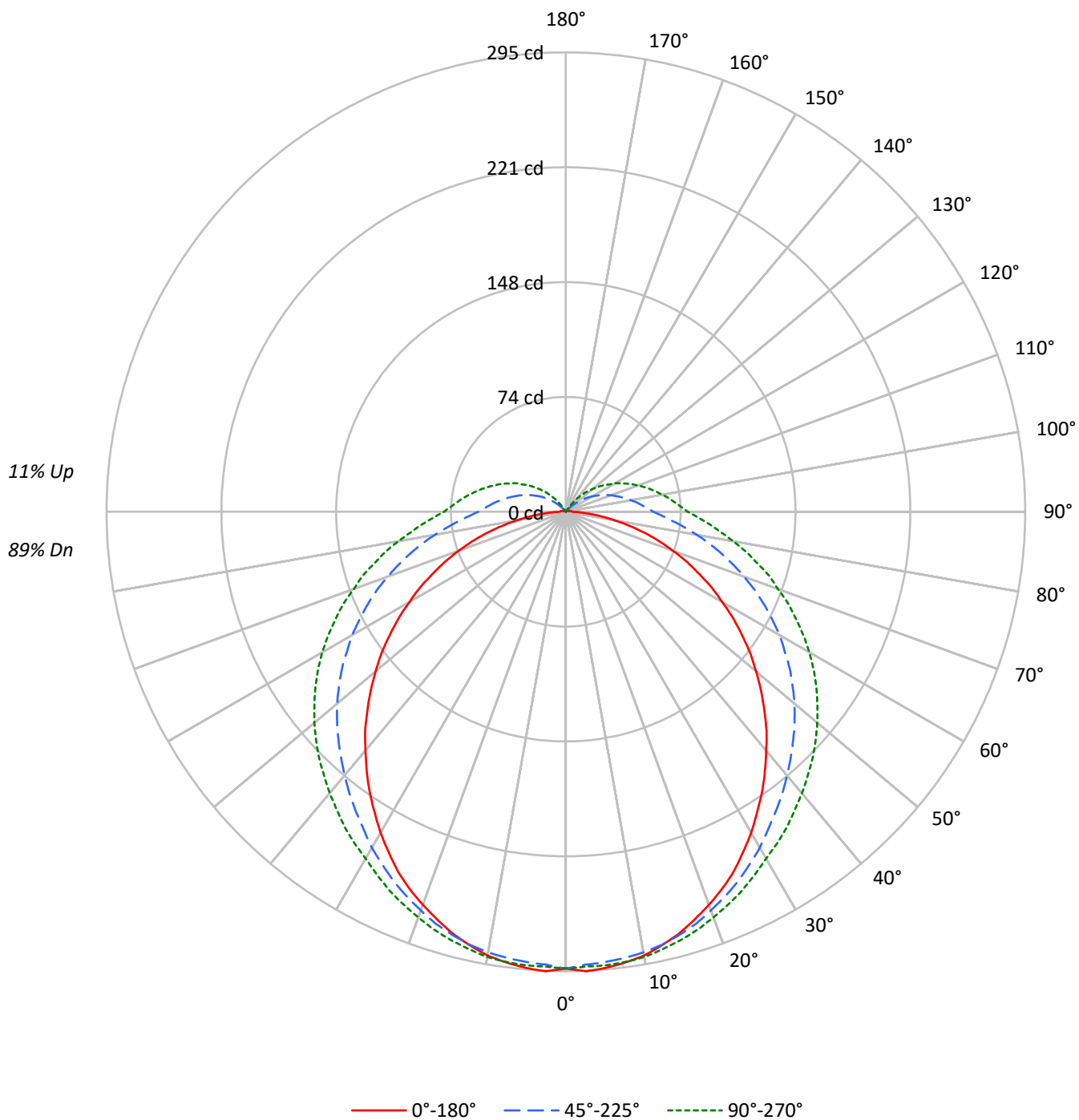
Lumens per Lamp: N/A
Luminaire Lumens: 1119.1 lumens
Efficiency: N/A
Efficacy: 86.1 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.31 / 1.42
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Direct

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

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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°	4643	4643	4643
5°	4673	4613	4646
10°	4652	4618	4666
15°	4597	4611	4667
20°	4525	4589	4668
25°	4454	4573	4684
30°	4350	4553	4699
35°	4245	4541	4781
40°	4137	4567	4875
45°	4034	4625	5014
50°	3925	4721	5191
55°	3811	4843	5420
60°	3672	5018	5718
65°	3536	5255	6113
70°	3383	5628	6706
75°	3199	6318	7773
80°	2908	7785	9954
85°	2779	12514	16836

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°

Vertical Angle: 87.5°

Luminance: 30846 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	27.8	2.5
10°-20°	79.7	7.1
20°-30°	120.8	10.8
30°-40°	147.1	13.1
40°-50°	158.3	14.1
50°-60°	153.7	13.7
60°-70°	134.3	12.0
70°-80°	103.3	9.2
80°-90°	69.2	6.2
90°-100°	47.8	4.3
100°-110°	34.9	3.1
110°-120°	23.0	2.1
120°-130°	12.8	1.1
130°-140°	5.4	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°	228.3	20.4
0°-40°	375.5	33.6
0°-60°	687.5	61.4
0°-90°	994.3	88.8
90°-120°	105.6	9.4
90°-150°	124.8	11.2
90°-180°	125.0	11.2
0°-180°	1119.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	293	293	293	293	293	
5°	294	293	290	293	292	28
15°	280	281	281	285	285	79
25°	255	258	262	267	268	117
35°	220	227	235	244	247	137
45°	180	192	207	220	224	139
55°	138	153	176	191	196	124
65°	94	115	140	158	163	94
75°	52	76	103	122	127	55
85°	15	42	69	87	93	16
90°	4	29	56	73	78	3
95°	3	23	49	65	70	3
105°	2	14	37	51	56	2
115°	2	6	26	38	43	2
125°	1	1	14	26	30	1
135°	0	0	5	14	17	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

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	293.3	293.3	293.3	293.3	293.3
2.5°	295.4	294.1	291.1	293.3	292.4
5°	294.1	292.8	290.3	292.8	292.4
7.5°	292.0	291.1	289.0	292.0	291.6
10°	289.4	288.6	287.3	290.7	290.3
12.5°	285.2	285.6	284.8	288.2	287.7
15°	280.5	281.4	281.4	285.2	284.8
17.5°	274.6	276.3	277.5	281.4	281.4
20°	268.6	270.7	272.4	277.1	277.1
22.5°	262.2	264.8	267.3	272.0	272.9
25°	255.0	258.0	261.8	266.9	268.2
27.5°	246.5	251.2	255.4	261.8	262.7
30°	238.0	243.5	249.1	255.9	257.1
32.5°	228.7	235.0	241.8	249.9	252.5
35°	219.7	227.0	235.0	244.4	247.4
37.5°	210.0	218.0	228.2	238.4	241.4
40°	200.2	209.5	221.0	232.1	235.9
42.5°	190.8	200.2	213.8	226.1	229.9
45°	180.2	191.7	206.6	219.7	224.0
47.5°	170.0	182.3	199.3	212.9	217.6
50°	159.4	172.6	191.7	206.1	210.8
52.5°	149.2	163.2	183.6	198.5	203.6
55°	138.1	153.4	175.5	190.8	196.4
57.5°	127.5	144.5	166.6	183.2	188.7
60°	116.0	134.3	158.5	174.7	180.6
62.5°	105.8	125.0	149.2	166.6	172.1
65°	94.4	115.2	140.3	157.7	163.2
67.5°	84.2	105.8	131.3	148.8	154.7
70°	73.1	95.2	121.6	139.8	144.9
72.5°	62.9	85.9	112.6	130.5	136.9
75°	52.3	76.1	103.3	121.6	127.1
77.5°	42.1	66.7	94.4	112.6	118.6
80°	31.9	57.8	85.4	103.3	109.2
82.5°	23.4	48.9	76.9	94.8	100.3
85°	15.3	41.7	68.9	86.7	92.7
87.5°	9.4	34.9	62.1	79.5	85.0
90°	4.3	28.9	56.1	73.1	78.2
92.5°	3.8	26.4	52.3	68.9	74.0
95°	3.4	23.4	48.9	65.0	70.1
97.5°	3.0	21.3	45.9	61.6	66.7
100°	3.0	18.7	42.5	58.2	62.9
102.5°	2.6	16.6	39.5	54.8	59.5
105°	2.1	14.5	36.6	51.4	56.1
107.5°	2.1	12.3	33.6	48.0	52.7
110°	1.7	10.2	31.0	44.6	49.3



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	1.7	8.5	28.1	41.7	46.3
115°	1.7	6.4	25.5	38.3	42.9
117.5°	1.3	4.7	22.5	35.3	39.5
120°	1.3	3.0	20.0	31.9	36.6
122.5°	1.3	1.7	17.4	28.9	32.7
125°	0.9	0.9	14.5	25.9	29.8
127.5°	0.9	0.4	11.9	22.5	26.4
130°	0.9	0.4	9.4	19.6	23.0
132.5°	0.9	0.4	6.8	16.6	20.0
135°	0.4	0.4	4.7	13.6	17.0
137.5°	0.4	0.4	2.6	10.6	13.6
140°	0.4	0.0	0.9	7.7	10.2
142.5°	0.4	0.0	0.0	5.1	7.2
145°	0.0	0.0	0.0	2.6	4.7
147.5°	0.0	0.0	0.0	0.4	1.7
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	15.72	17.20	16.25	17.73	18.31	17.58	19.06	18.10	19.58	20.16
	3H	17.60	18.96	18.14	19.50	20.11	20.23	21.59	20.77	22.12	22.74
	4H	18.33	19.62	18.89	20.17	20.80	21.54	22.83	22.10	23.38	24.01
	6H	18.90	20.09	19.47	20.66	21.30	22.92	24.12	23.49	24.68	25.33
	8H	19.09	20.24	19.67	20.83	21.48	23.63	24.78	24.22	25.37	26.02
	12H	19.24	20.34	19.83	20.92	21.60	24.45	25.56	25.04	26.14	26.82
4H	2H	16.85	18.13	17.41	18.69	19.32	18.20	19.49	18.76	20.04	20.67
	3H	19.03	20.13	19.60	20.72	21.37	21.14	22.24	21.71	22.83	23.48
	4H	19.94	20.95	20.53	21.55	22.24	22.66	23.67	23.25	24.27	24.95
	6H	20.69	21.59	21.30	22.22	22.91	24.26	25.15	24.86	25.78	26.47
	8H	20.97	21.82	21.59	22.44	23.15	25.09	25.94	25.71	26.56	27.27
	12H	21.20	21.97	21.84	22.62	23.33	26.05	26.82	26.69	27.47	28.18
8H	4H	20.87	21.72	21.49	22.34	23.05	23.07	23.91	23.68	24.54	25.24
	6H	21.93	22.65	22.58	23.32	24.03	24.92	25.64	25.57	26.30	27.02
	8H	22.39	23.04	23.05	23.71	24.44	25.96	26.61	26.62	27.28	28.01
	12H	22.80	23.38	23.46	24.04	24.83	27.17	27.75	27.83	28.41	29.20
12H	4H	21.14	21.91	21.78	22.56	23.27	23.12	23.89	23.76	24.54	25.25
	6H	22.36	23.01	23.02	23.69	24.41	25.05	25.70	25.71	26.37	27.10
	8H	22.99	23.57	23.65	24.23	25.01	26.20	26.78	26.86	27.44	28.23