

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: P997565

Luminaire Tested: SA2XXDP-B290DB27-4F0-XX-W2A-D

Issue Date: 5/2/2025

Test Information

Test Method: LM-79-2019
Report Number: P997565
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-B290DB27-4F0-XX-W2A-D
Description: Define 2 Direct Recessed with 2700K BioUP LEDs {m-DER=0.473} {m-EER=0.52}
Light Source: -
Ballast/Driver: -

Summary

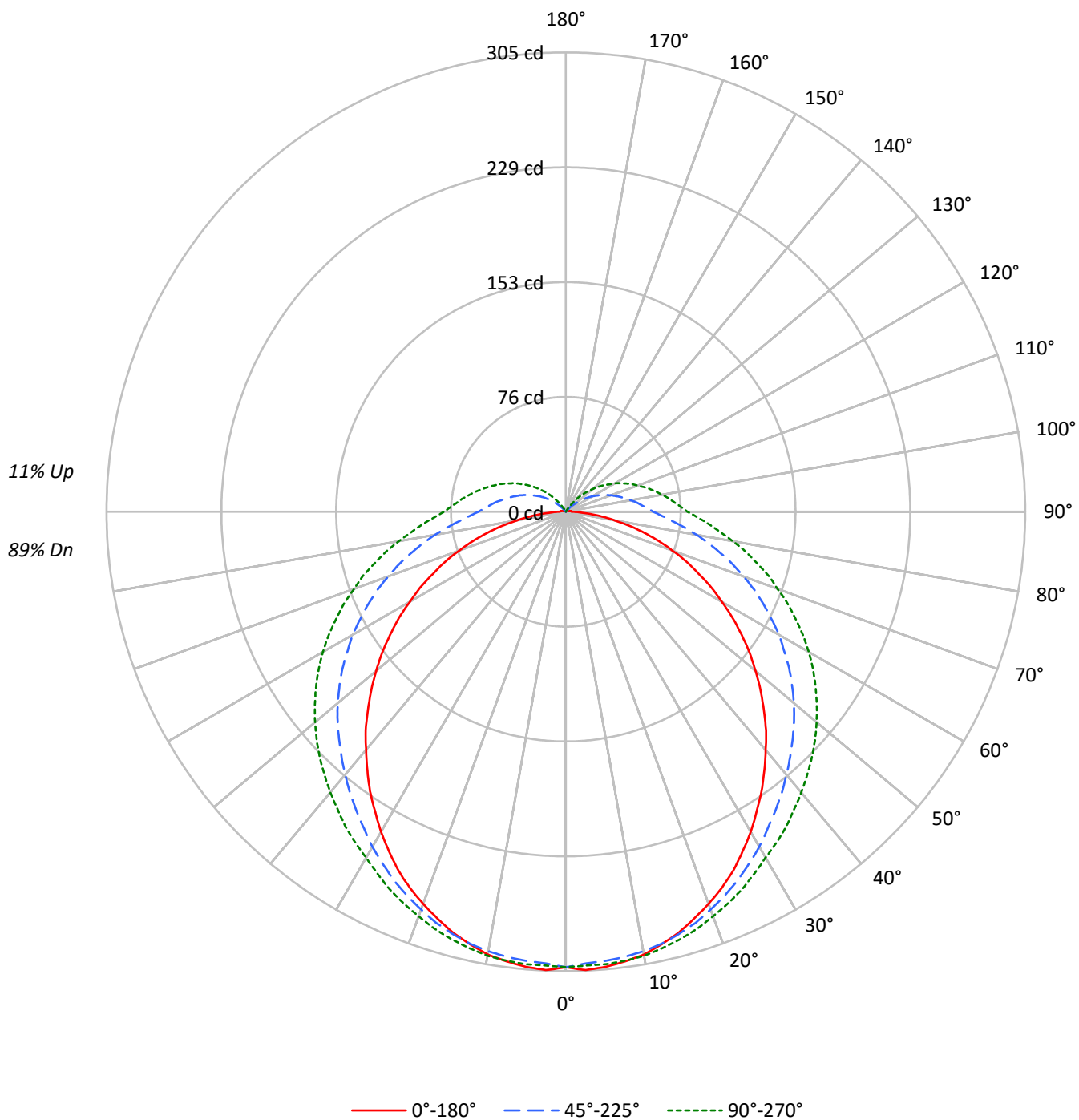
Lumens per Lamp: N/A
Luminaire Lumens: 1154.0 lumens
Efficiency: N/A
Efficacy: 88.8 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.31 / 1.42
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Direct

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°	4787	4787	4787
5°	4819	4757	4792
10°	4798	4763	4812
15°	4741	4756	4813
20°	4666	4733	4814
25°	4593	4716	4831
30°	4487	4696	4847
35°	4379	4684	4930
40°	4265	4709	5027
45°	4159	4768	5171
50°	4049	4869	5354
55°	3933	4995	5588
60°	3790	5176	5898
65°	3644	5416	6304
70°	3490	5804	6919
75°	3297	6514	8018
80°	2999	8031	10264
85°	2870	12895	17363

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°

Vertical Angle: 87.5°

Luminance: 31826 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	28.7	2.5
10°-20°	82.2	7.1
20°-30°	124.6	10.8
30°-40°	151.7	13.1
40°-50°	163.2	14.1
50°-60°	158.5	13.7
60°-70°	138.4	12.0
70°-80°	106.6	9.2
80°-90°	71.4	6.2
90°-100°	49.2	4.3
100°-110°	36.0	3.1
110°-120°	23.7	2.1
120°-130°	13.2	1.1
130°-140°	5.5	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°	235.5	20.4
0°-40°	387.2	33.6
0°-60°	709.0	61.4
0°-90°	1025.4	88.9
90°-120°	108.9	9.4
90°-150°	128.6	11.1
90°-180°	129.0	11.2
0°-180°	1154.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	302	302	302	302	302	
5°	303	302	299	302	302	29
15°	289	290	290	294	294	81
25°	263	266	270	275	277	121
35°	227	234	242	252	255	142
45°	186	198	213	227	231	143
55°	142	158	181	197	202	127
65°	97	119	145	163	168	97
75°	54	78	106	125	131	57
85°	16	43	71	89	96	17
90°	4	30	58	75	81	3
95°	4	24	50	67	72	3
105°	2	15	38	53	58	3
115°	2	7	26	39	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

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	302.4	302.4	302.4	302.4	302.4
2.5°	304.6	303.3	300.2	302.4	301.6
5°	303.3	302.0	299.4	302.0	301.6
7.5°	301.1	300.2	298.1	301.1	300.7
10°	298.5	297.6	296.3	299.8	299.4
12.5°	294.1	294.5	293.7	297.2	296.7
15°	289.3	290.2	290.2	294.1	293.7
17.5°	283.2	284.9	286.2	290.2	290.2
20°	277.0	279.2	281.0	285.8	285.8
22.5°	270.4	273.1	275.7	280.5	281.4
25°	263.0	266.1	270.0	275.3	276.6
27.5°	254.2	259.0	263.4	270.0	270.9
30°	245.5	251.2	256.9	263.9	265.2
32.5°	235.8	242.4	249.4	257.7	260.4
35°	226.6	234.1	242.4	252.0	255.1
37.5°	216.5	224.9	235.4	245.9	249.0
40°	206.4	216.1	227.9	239.3	243.3
42.5°	196.8	206.4	220.5	233.2	237.1
45°	185.8	197.7	213.0	226.6	231.0
47.5°	175.3	188.0	205.6	219.6	224.4
50°	164.4	178.0	197.7	212.6	217.4
52.5°	153.8	168.3	189.4	204.7	210.0
55°	142.5	158.2	181.0	196.8	202.5
57.5°	131.5	149.0	171.8	188.9	194.6
60°	119.7	138.5	163.5	180.1	186.3
62.5°	109.1	128.9	153.8	171.8	177.5
65°	97.3	118.8	144.6	162.6	168.3
67.5°	86.8	109.1	135.4	153.4	159.5
70°	75.4	98.2	125.4	144.2	149.5
72.5°	64.9	88.5	116.2	134.6	141.1
75°	53.9	78.5	106.5	125.4	131.1
77.5°	43.4	68.8	97.3	116.2	122.3
80°	32.9	59.6	88.1	106.5	112.6
82.5°	24.1	50.4	79.3	97.7	103.4
85°	15.8	43.0	71.0	89.4	95.6
87.5°	9.6	35.9	64.0	82.0	87.7
90°	4.4	29.8	57.9	75.4	80.7
92.5°	3.9	27.2	53.9	71.0	76.3
95°	3.5	24.1	50.4	67.1	72.3
97.5°	3.1	21.9	47.3	63.6	68.8
100°	3.1	19.3	43.8	60.0	64.9
102.5°	2.6	17.1	40.8	56.5	61.4
105°	2.2	14.9	37.7	53.0	57.9
107.5°	2.2	12.7	34.6	49.5	54.4
110°	1.8	10.5	32.0	46.0	50.8



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	1.8	8.8	28.9	43.0	47.8
115°	1.8	6.6	26.3	39.4	44.3
117.5°	1.3	4.8	23.2	36.4	40.8
120°	1.3	3.1	20.6	32.9	37.7
122.5°	1.3	1.8	18.0	29.8	33.8
125°	0.9	0.9	14.9	26.7	30.7
127.5°	0.9	0.4	12.3	23.2	27.2
130°	0.9	0.4	9.6	20.2	23.7
132.5°	0.9	0.4	7.0	17.1	20.6
135°	0.4	0.4	4.8	14.0	17.5
137.5°	0.4	0.4	2.6	11.0	14.0
140°	0.4	0.0	0.9	7.9	10.5
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	15.83	17.31	16.36	17.84	18.42	17.68	19.16	18.21	19.69	20.27
	3H	17.71	19.07	18.25	19.60	20.22	20.34	21.69	20.88	22.23	22.85
	4H	18.44	19.73	19.00	20.28	20.91	21.65	22.93	22.21	23.49	24.11
	6H	19.00	20.20	19.57	20.77	21.41	23.02	24.22	23.59	24.79	25.43
	8H	19.20	20.35	19.78	20.93	21.58	23.74	24.89	24.32	25.48	26.13
	12H	19.34	20.45	19.93	21.03	21.71	24.56	25.66	25.15	26.24	26.92
4H	2H	16.95	18.24	17.51	18.79	19.42	18.31	19.59	18.87	20.15	20.78
	3H	19.13	20.23	19.70	20.83	21.48	21.25	22.35	21.82	22.94	23.59
	4H	20.05	21.06	20.64	21.66	22.34	22.76	23.78	23.36	24.38	25.06
	6H	20.80	21.70	21.41	22.32	23.02	24.36	25.26	24.97	25.88	26.58
	8H	21.08	21.92	21.70	22.55	23.26	25.20	26.04	25.82	26.67	27.38
	12H	21.31	22.07	21.94	22.73	23.44	26.16	26.93	26.80	27.58	28.29
8H	4H	20.98	21.82	21.60	22.45	23.16	23.17	24.02	23.79	24.64	25.35
	6H	22.04	22.76	22.69	23.42	24.13	25.03	25.75	25.67	26.41	27.12
	8H	22.50	23.15	23.16	23.82	24.54	26.07	26.71	26.72	27.39	28.11
	12H	22.90	23.48	23.56	24.15	24.93	27.28	27.85	27.94	28.52	29.30
12H	4H	21.25	22.01	21.88	22.67	23.38	23.23	23.99	23.86	24.65	25.36
	6H	22.47	23.12	23.13	23.79	24.52	25.16	25.81	25.81	26.48	27.20
	8H	23.09	23.67	23.75	24.34	25.12	26.31	26.89	26.97	27.55	28.34