

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: P997574

Luminaire Tested: SA2XXDP-B290DB2750-4F0-XX-W2A-D_3500K

Issue Date: 5/2/2025

Test Information

Test Method: LM-79-2019
Report Number: P997574
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-B290DB2750-4F0-XX-W2A-D_3500K
Description: Define 2 Direct Recessed with 3500K BioUP LEDs {m-DER=0.721} {m-EER=0.792}
Light Source: -
Ballast/Driver: -

Summary

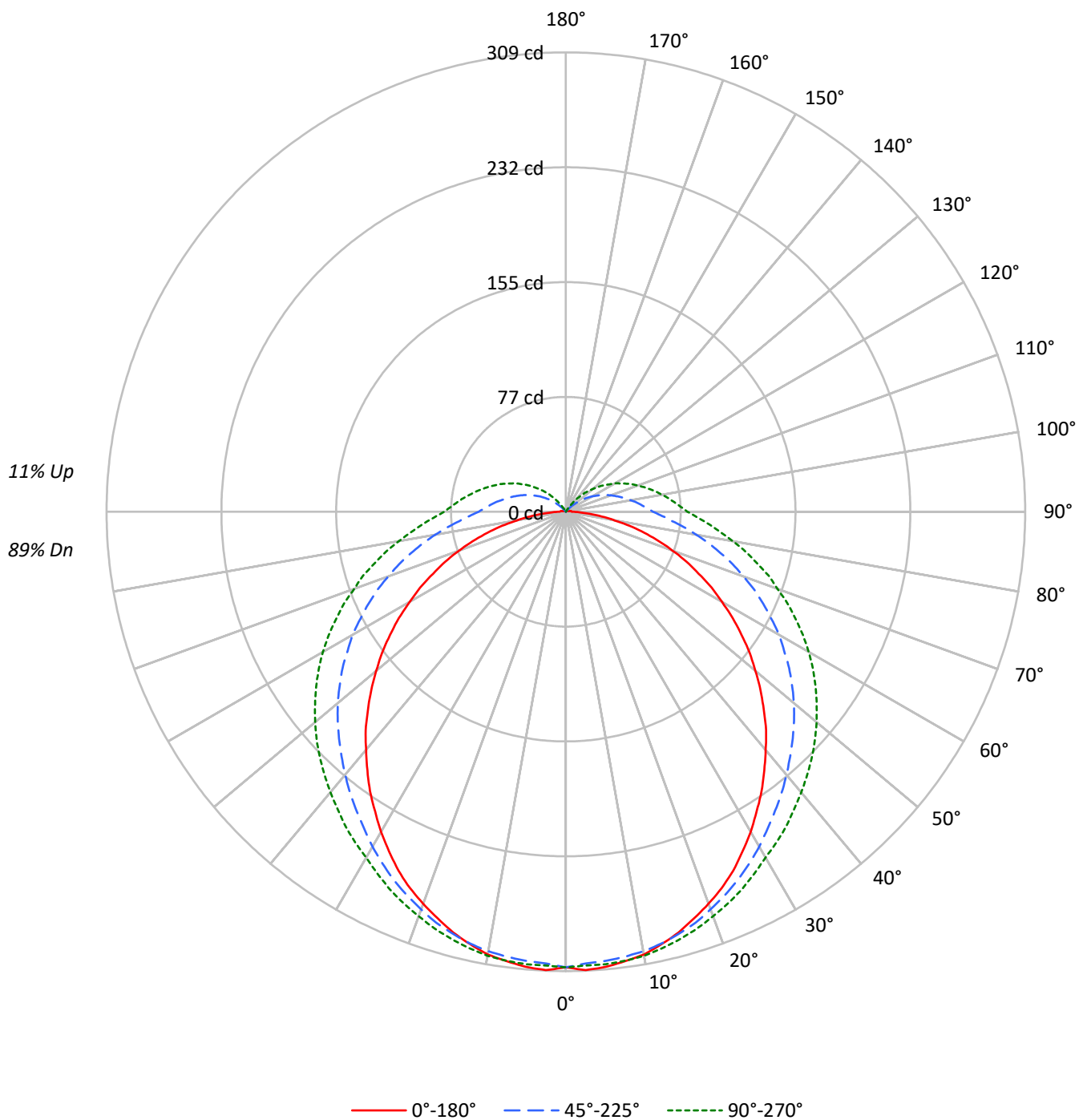
Lumens per Lamp: N/A
Luminaire Lumens: 1169.0 lumens
Efficiency: N/A
Efficacy: 89.9 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.31 / 1.42
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Direct

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°	4850	4850	4850
5°	4883	4819	4854
10°	4861	4825	4875
15°	4802	4816	4875
20°	4727	4794	4877
25°	4653	4777	4894
30°	4544	4756	4909
35°	4437	4744	4993
40°	4321	4771	5092
45°	4215	4831	5238
50°	4100	4933	5423
55°	3982	5061	5660
60°	3837	5243	5974
65°	3693	5487	6386
70°	3536	5878	7007
75°	3339	6599	8122
80°	3036	8131	10401
85°	2906	13059	17581

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°

Vertical Angle: 87.5°

Luminance: 32225 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	29.0	2.5
10°-20°	83.3	7.1
20°-30°	126.2	10.8
30°-40°	153.7	13.1
40°-50°	165.4	14.1
50°-60°	160.6	13.7
60°-70°	140.2	12.0
70°-80°	108.0	9.2
80°-90°	72.3	6.2
90°-100°	49.9	4.3
100°-110°	36.4	3.1
110°-120°	24.1	2.1
120°-130°	13.4	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°	238.5	20.4
0°-40°	392.2	33.6
0°-60°	718.2	61.4
0°-90°	1038.7	88.9
90°-120°	110.4	9.4
90°-150°	130.3	11.1
90°-180°	130.0	11.1
0°-180°	1169.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	306	306	306	306	306	
5°	307	306	303	306	306	29
15°	293	294	294	298	298	83
25°	266	270	274	279	280	123
35°	230	237	246	255	258	143
45°	188	200	216	230	234	145
55°	144	160	183	199	205	129
65°	99	120	146	165	170	98
75°	55	80	108	127	133	58
85°	16	44	72	91	97	17
90°	4	30	59	76	82	3
95°	4	24	51	68	73	3
105°	2	15	38	54	59	3
115°	2	7	27	40	45	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°	306.4	306.4	306.4	306.4	306.4
2.5°	308.6	307.3	304.1	306.4	305.5
5°	307.3	305.9	303.3	305.9	305.5
7.5°	305.0	304.1	301.9	305.0	304.6
10°	302.4	301.5	300.2	303.7	303.3
12.5°	297.9	298.4	297.5	301.0	300.6
15°	293.0	293.9	293.9	297.9	297.5
17.5°	286.8	288.6	289.9	293.9	293.9
20°	280.6	282.8	284.6	289.5	289.5
22.5°	274.0	276.6	279.3	284.2	285.1
25°	266.4	269.5	273.5	278.8	280.2
27.5°	257.5	262.4	266.9	273.5	274.4
30°	248.6	254.4	260.2	267.3	268.6
32.5°	238.9	245.5	252.6	261.1	263.7
35°	229.6	237.1	245.5	255.3	258.4
37.5°	219.3	227.8	238.4	249.1	252.2
40°	209.1	218.9	230.9	242.4	246.4
42.5°	199.4	209.1	223.3	236.2	240.2
45°	188.3	200.3	215.8	229.6	234.0
47.5°	177.6	190.5	208.2	222.5	227.3
50°	166.5	180.3	200.3	215.3	220.2
52.5°	155.8	170.5	191.8	207.4	212.7
55°	144.3	160.3	183.4	199.4	205.1
57.5°	133.2	151.0	174.1	191.4	197.1
60°	121.2	140.3	165.6	182.5	188.7
62.5°	110.6	130.5	155.8	174.1	179.8
65°	98.6	120.3	146.5	164.7	170.5
67.5°	87.9	110.6	137.2	155.4	161.6
70°	76.4	99.5	127.0	146.1	151.4
72.5°	65.7	89.7	117.7	136.3	143.0
75°	54.6	79.5	107.9	127.0	132.8
77.5°	44.0	69.7	98.6	117.7	123.9
80°	33.3	60.4	89.2	107.9	114.1
82.5°	24.4	51.1	80.4	99.0	104.8
85°	16.0	43.5	71.9	90.6	96.8
87.5°	9.8	36.4	64.8	83.0	88.8
90°	4.4	30.2	58.6	76.4	81.7
92.5°	4.0	27.5	54.6	71.9	77.3
95°	3.6	24.4	51.1	67.9	73.3
97.5°	3.1	22.2	48.0	64.4	69.7
100°	3.1	19.5	44.4	60.8	65.7
102.5°	2.7	17.3	41.3	57.3	62.2
105°	2.2	15.1	38.2	53.7	58.6
107.5°	2.2	12.9	35.1	50.2	55.1
110°	1.8	10.7	32.4	46.6	51.5



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	1.8	8.9	29.3	43.5	48.4
115°	1.8	6.7	26.6	40.0	44.8
117.5°	1.3	4.9	23.5	36.9	41.3
120°	1.3	3.1	20.9	33.3	38.2
122.5°	1.3	1.8	18.2	30.2	34.2
125°	0.9	0.9	15.1	27.1	31.1
127.5°	0.9	0.4	12.4	23.5	27.5
130°	0.9	0.4	9.8	20.4	24.0
132.5°	0.9	0.4	7.1	17.3	20.9
135°	0.4	0.4	4.9	14.2	17.8
137.5°	0.4	0.4	2.7	11.1	14.2
140°	0.4	0.0	0.9	8.0	10.7
142.5°	0.4	0.0	0.0	5.3	7.5
145°	0.0	0.0	0.0	2.7	4.9
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	15.88	17.36	16.40	17.89	18.46	17.73	19.21	18.25	19.74	20.31
	3H	17.76	19.11	18.30	19.65	20.27	20.39	21.74	20.92	22.28	22.89
	4H	18.49	19.77	19.05	20.33	20.95	21.69	22.98	22.25	23.53	24.16
	6H	19.05	20.25	19.62	20.81	21.46	23.07	24.27	23.64	24.83	25.48
	8H	19.24	20.39	19.83	20.98	21.63	23.79	24.94	24.37	25.52	26.17
	12H	19.39	20.49	19.98	21.07	21.76	24.60	25.71	25.19	26.29	26.97
4H	2H	17.00	18.29	17.56	18.84	19.47	18.35	19.64	18.91	20.19	20.82
	3H	19.18	20.28	19.75	20.87	21.52	21.29	22.39	21.86	22.99	23.64
	4H	20.09	21.11	20.69	21.71	22.39	22.81	23.82	23.40	24.42	25.10
	6H	20.85	21.74	21.46	22.37	23.06	24.41	25.30	25.02	25.93	26.62
	8H	21.13	21.97	21.74	22.60	23.30	25.25	26.09	25.86	26.72	27.42
	12H	21.35	22.12	21.99	22.77	23.48	26.20	26.97	26.84	27.62	28.34
8H	4H	21.03	21.87	21.64	22.49	23.20	23.22	24.06	23.83	24.69	25.39
	6H	22.09	22.80	22.73	23.47	24.18	25.07	25.79	25.72	26.46	27.17
	8H	22.54	23.19	23.20	23.87	24.59	26.11	26.76	26.77	27.43	28.16
	12H	22.95	23.53	23.61	24.19	24.98	27.32	27.90	27.98	28.56	29.35
12H	4H	21.29	22.06	21.93	22.71	23.42	23.27	24.04	23.91	24.69	25.40
	6H	22.52	23.17	23.17	23.84	24.56	25.20	25.85	25.86	26.52	27.25
	8H	23.14	23.72	23.80	24.38	25.17	26.35	26.93	27.01	27.60	28.38