

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: P997583

Luminaire Tested: SA2XXDP-B290DB30-4F0-XX-W2A-D

Issue Date: 5/2/2025

Test Information

Test Method: LM-79-2019
Report Number: P997583
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-B290DB30-4F0-XX-W2A-D
Description: Define 2 Direct Recessed with 3000K BioUP LEDs {m-DER=0.589} {m-EER=0.647}
Light Source: -
Ballast/Driver: -

Summary

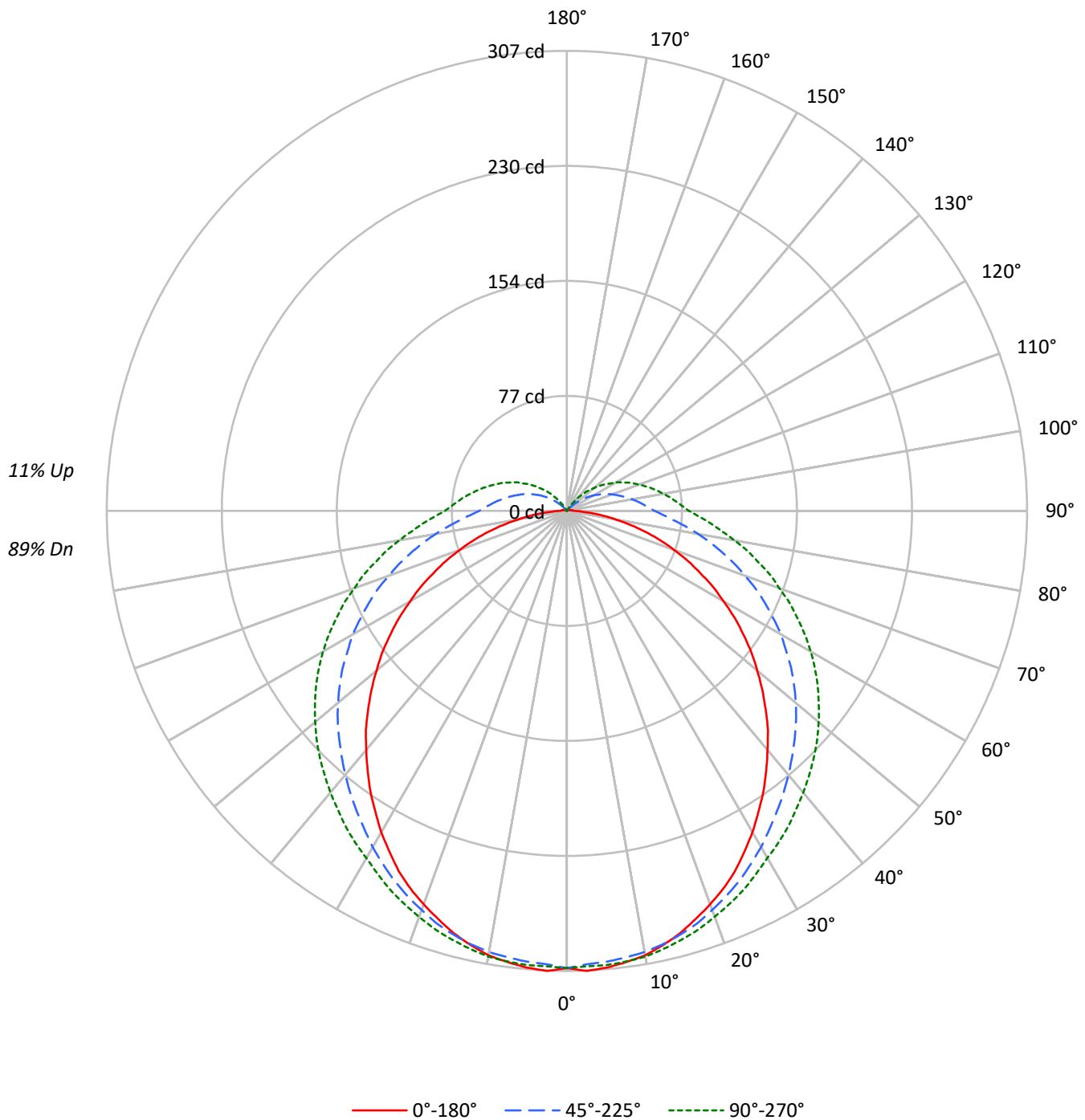
Lumens per Lamp: N/A
Luminaire Lumens: 1164.0 lumens
Efficiency: N/A
Efficacy: 89.5 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.31 / 1.42
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Direct

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°	4830	4830	4830
5°	4861	4799	4834
10°	4840	4804	4854
15°	4782	4797	4854
20°	4707	4774	4856
25°	4634	4756	4873
30°	4526	4736	4889
35°	4417	4725	4972
40°	4302	4751	5071
45°	4197	4811	5216
50°	4083	4910	5400
55°	3966	5039	5638
60°	3821	5220	5949
65°	3674	5465	6360
70°	3517	5850	6979
75°	3327	6569	8085
80°	3026	8104	10355
85°	2888	13004	17508

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°

Vertical Angle: 87.5°

Luminance: 32080 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	28.9	2.5
10°-20°	82.9	7.1
20°-30°	125.7	10.8
30°-40°	153.0	13.1
40°-50°	164.7	14.1
50°-60°	159.9	13.7
60°-70°	139.6	12.0
70°-80°	107.5	9.2
80°-90°	72.0	6.2
90°-100°	49.6	4.3
100°-110°	36.3	3.1
110°-120°	23.9	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°	237.5	20.4
0°-40°	390.6	33.6
0°-60°	715.1	61.4
0°-90°	1034.2	88.9
90°-120°	109.9	9.4
90°-150°	129.7	11.1
90°-180°	130.0	11.2
0°-180°	1164.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	305	305	305	305	305	
5°	306	305	302	305	304	29
15°	292	293	293	297	296	82
25°	265	268	272	278	279	122
35°	229	236	244	254	257	143
45°	188	199	215	229	233	145
55°	144	160	183	198	204	129
65°	98	120	146	164	170	98
75°	54	79	107	126	132	58
85°	16	43	72	90	96	17
90°	4	30	58	76	81	3
95°	4	24	51	68	73	3
105°	2	15	38	54	58	3
115°	2	7	26	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°	305.1	305.1	305.1	305.1	305.1
2.5°	307.3	305.9	302.8	305.1	304.2
5°	305.9	304.6	302.0	304.6	304.2
7.5°	303.7	302.8	300.6	303.7	303.3
10°	301.1	300.2	298.9	302.4	302.0
12.5°	296.7	297.1	296.2	299.8	299.3
15°	291.8	292.7	292.7	296.7	296.2
17.5°	285.6	287.4	288.7	292.7	292.7
20°	279.4	281.6	283.4	288.3	288.3
22.5°	272.8	275.4	278.1	283.0	283.8
25°	265.3	268.4	272.3	277.6	279.0
27.5°	256.4	261.3	265.7	272.3	273.2
30°	247.6	253.3	259.1	266.2	267.5
32.5°	237.9	244.5	251.6	260.0	262.6
35°	228.6	236.1	244.5	254.2	257.3
37.5°	218.4	226.8	237.4	248.0	251.1
40°	208.2	218.0	229.9	241.4	245.4
42.5°	198.5	208.2	222.4	235.2	239.2
45°	187.5	199.4	214.9	228.6	233.0
47.5°	176.8	189.7	207.4	221.5	226.4
50°	165.8	179.5	199.4	214.4	219.3
52.5°	155.2	169.8	191.0	206.5	211.8
55°	143.7	159.6	182.6	198.5	204.3
57.5°	132.6	150.3	173.3	190.6	196.3
60°	120.7	139.7	164.9	181.7	187.9
62.5°	110.1	130.0	155.2	173.3	179.1
65°	98.1	119.8	145.9	164.0	169.8
67.5°	87.5	110.1	136.6	154.7	160.9
70°	76.0	99.0	126.4	145.5	150.8
72.5°	65.4	89.3	117.2	135.7	142.4
75°	54.4	79.1	107.4	126.4	132.2
77.5°	43.8	69.4	98.1	117.2	123.4
80°	33.2	60.1	88.9	107.4	113.6
82.5°	24.3	50.8	80.0	98.6	104.3
85°	15.9	43.3	71.6	90.2	96.4
87.5°	9.7	36.3	64.5	82.7	88.4
90°	4.4	30.1	58.4	76.0	81.3
92.5°	4.0	27.4	54.4	71.6	76.9
95°	3.5	24.3	50.8	67.6	72.9
97.5°	3.1	22.1	47.7	64.1	69.4
100°	3.1	19.5	44.2	60.6	65.4
102.5°	2.7	17.2	41.1	57.0	61.9
105°	2.2	15.0	38.0	53.5	58.4
107.5°	2.2	12.8	34.9	50.0	54.8
110°	1.8	10.6	32.3	46.4	51.3

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	1.8	8.8	29.2	43.3	48.2
115°	1.8	6.6	26.5	39.8	44.7
117.5°	1.3	4.9	23.4	36.7	41.1
120°	1.3	3.1	20.8	33.2	38.0
122.5°	1.3	1.8	18.1	30.1	34.0
125°	0.9	0.9	15.0	27.0	30.9
127.5°	0.9	0.4	12.4	23.4	27.4
130°	0.9	0.4	9.7	20.3	23.9
132.5°	0.9	0.4	7.1	17.2	20.8
135°	0.4	0.4	4.9	14.1	17.7
137.5°	0.4	0.4	2.7	11.1	14.1
140°	0.4	0.0	0.9	8.0	10.6
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	15.86	17.34	16.39	17.87	18.45	17.71	19.19	18.24	19.72	20.30
	3H	17.74	19.09	18.28	19.63	20.25	20.37	21.73	20.91	22.26	22.88
	4H	18.47	19.76	19.03	20.31	20.94	21.68	22.96	22.24	23.52	24.14
	6H	19.03	20.23	19.60	20.80	21.44	23.05	24.25	23.63	24.82	25.46
	8H	19.23	20.38	19.81	20.96	21.61	23.77	24.92	24.35	25.51	26.16
	12H	19.37	20.48	19.96	21.06	21.74	24.59	25.69	25.18	26.27	26.96
4H	2H	16.98	18.27	17.54	18.82	19.45	18.34	19.63	18.90	20.18	20.81
	3H	19.16	20.26	19.73	20.86	21.51	21.28	22.38	21.85	22.97	23.62
	4H	20.08	21.09	20.67	21.69	22.37	22.79	23.81	23.39	24.41	25.09
	6H	20.83	21.73	21.44	22.35	23.04	24.39	25.29	25.00	25.91	26.61
	8H	21.11	21.95	21.72	22.58	23.29	25.23	26.07	25.85	26.70	27.41
	12H	21.33	22.10	21.97	22.75	23.47	26.19	26.96	26.83	27.61	28.32
8H	4H	21.01	21.85	21.62	22.48	23.18	23.20	24.05	23.82	24.67	25.38
	6H	22.07	22.79	22.71	23.45	24.16	25.06	25.78	25.70	26.44	27.15
	8H	22.53	23.18	23.18	23.85	24.57	26.10	26.75	26.75	27.42	28.14
	12H	22.93	23.51	23.59	24.18	24.96	27.31	27.89	27.97	28.55	29.33
12H	4H	21.28	22.04	21.91	22.69	23.41	23.26	24.02	23.89	24.68	25.39
	6H	22.50	23.15	23.16	23.82	24.55	25.19	25.84	25.84	26.51	27.23
	8H	23.12	23.70	23.78	24.36	25.15	26.34	26.92	27.00	27.58	28.37