

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: P997580

Luminaire Tested: SA2XXDP-B290DB2750-4F0-XX-W2A-F_4000K

Issue Date: 5/2/2025

Test Information

Test Method: LM-79-2019
Report Number: P997580
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-10)
Test Lab: INNOVATION CENTER
Issue Date: 5/2/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: SA2XXDP-B290DB2750-4F0-XX-W2A-F_4000K
Description: Define 2 Direct Recessed with 4000K BioUP LEDs {m-DER=0.865} {m-EER=0.951}
Light Source: -
Ballast/Driver: -

Summary

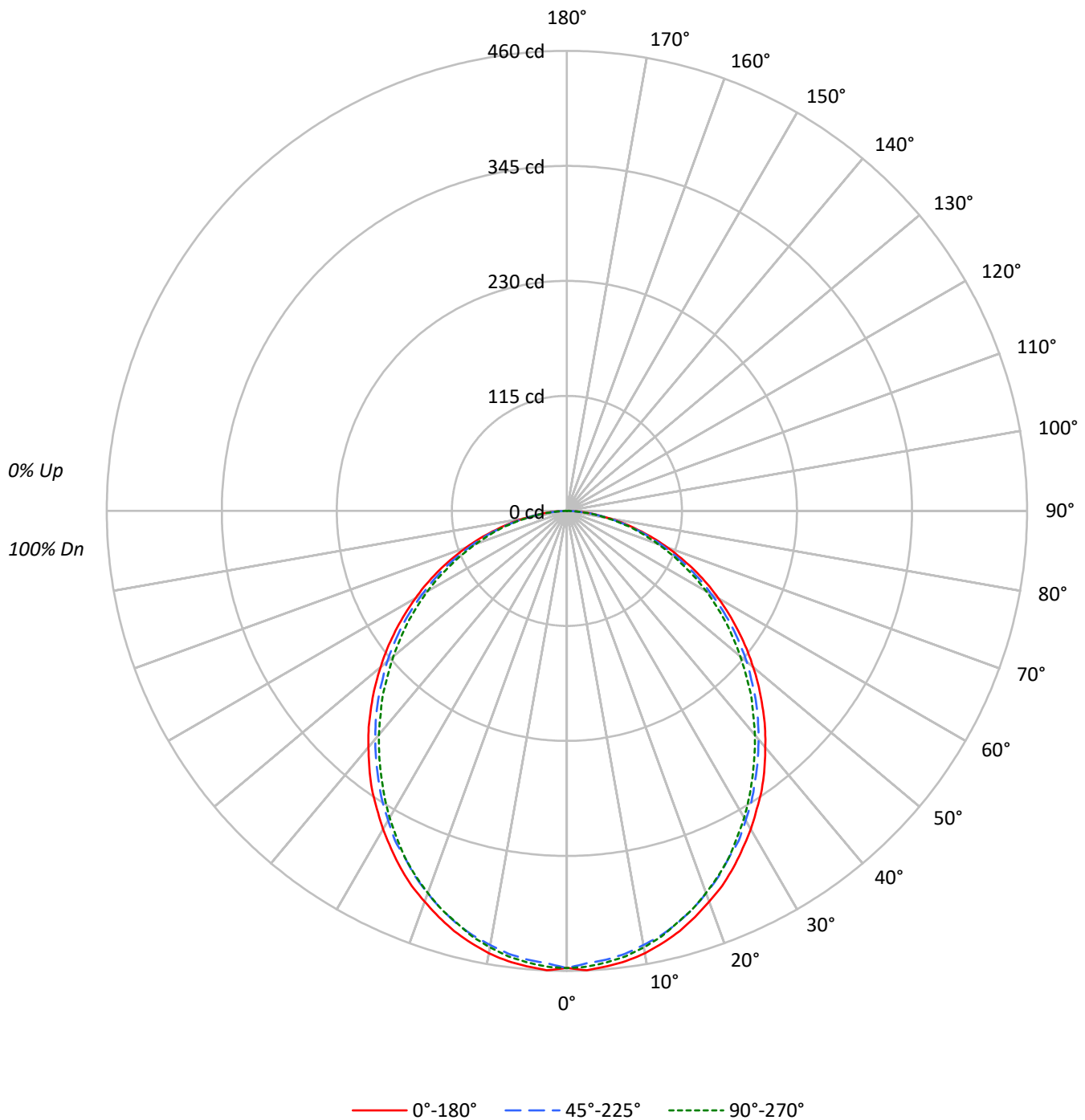
Lumens per Lamp: N/A
Luminaire Lumens: 1163.0 lumens
Efficiency: N/A
Efficacy: 89.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Direct

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
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102
1	109	104	100	96	106	102	98	95	98	95	92		94	91	89		90
2	99	91	85	79	97	89	83	78	86	81	76		83	78	74		80
3	91	80	72	66	88	79	71	65	76	69	64		73	68	63		71
4	83	71	63	56	81	70	62	56	68	61	55		65	59	54		63
5	77	64	55	49	75	63	55	48	61	53	48		59	52	47		57
6	71	58	49	43	69	57	48	42	55	48	42		53	47	42		52
7	66	52	44	38	64	52	43	38	50	43	37		49	42	37		47
8	61	48	40	34	60	47	39	34	46	39	33		45	38	33		44
9	57	44	36	30	56	43	36	30	42	35	30		41	35	30		40
10	54	41	33	28	53	40	33	28	39	32	27		38	32	27		37

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7236	7236	7236
5°	7263	7158	7201
10°	7220	7087	7122
15°	7130	6994	6988
20°	7004	6856	6849
25°	6878	6686	6686
30°	6717	6531	6476
35°	6566	6344	6251
40°	6377	6158	6040
45°	6190	5973	5825
50°	5987	5780	5575
55°	5773	5555	5348
60°	5537	5287	5094
65°	5285	5023	4791
70°	4961	4698	4475
75°	4514	4330	4220
80°	4011	3883	3683
85°	3269	3106	2797

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 6190 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	43.0	3.7
10°-20°	121.1	10.4
20°-30°	177.9	15.3
30°-40°	206.6	17.8
40°-50°	206.4	17.7
50°-60°	179.9	15.5
60°-70°	133.0	11.4
70°-80°	75.3	6.5
80°-90°	19.9	1.7
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	342.0	29.4
0°-40°	548.6	47.2
0°-60°	934.9	80.4
0°-90°	1163.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1163.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	457	457	457	457	457	
5°	457	455	450	454	453	43
15°	435	432	427	429	426	123
25°	394	390	383	384	383	181
35°	340	335	328	326	324	212
45°	276	273	267	262	260	213
55°	209	207	201	196	194	187
65°	141	138	134	130	128	139
75°	74	73	71	68	69	79
85°	18	18	17	16	15	21
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	457.1	457.1	457.1	457.1	457.1
2.5°	459.8	457.6	452.7	457.1	456.2
5°	457.1	455.4	450.5	454.0	453.2
7.5°	454.0	451.4	446.6	450.1	449.2
10°	449.2	446.1	440.9	444.4	443.1
12.5°	442.6	440.0	434.7	436.9	436.0
15°	435.1	432.5	426.8	428.6	426.4
17.5°	425.9	423.3	417.6	419.8	417.6
20°	415.8	413.2	407.0	408.3	406.6
22.5°	405.7	401.7	396.0	396.0	395.1
25°	393.8	390.3	382.8	383.7	382.8
27.5°	380.6	377.6	371.9	370.5	368.3
30°	367.5	363.9	357.3	356.0	354.3
32.5°	353.4	350.8	343.7	341.1	339.3
35°	339.8	335.4	328.3	325.7	323.5
37.5°	324.4	320.4	313.4	310.3	308.1
40°	308.6	305.0	298.0	294.1	292.3
42.5°	293.2	289.7	282.6	278.2	275.6
45°	276.5	273.4	266.8	262.0	260.2
47.5°	260.2	257.1	250.1	245.3	242.6
50°	243.1	240.9	234.7	228.6	226.4
52.5°	226.4	223.3	217.6	212.7	209.7
55°	209.2	206.6	201.3	196.0	193.8
57.5°	192.1	189.9	184.2	178.9	177.1
60°	174.9	173.2	167.0	162.2	160.9
62.5°	158.2	155.2	150.8	146.4	144.6
65°	141.1	138.5	134.1	130.1	127.9
67.5°	123.5	121.3	117.4	114.3	112.5
70°	107.2	105.5	101.5	98.5	96.7
72.5°	90.5	88.8	86.6	83.5	82.2
75°	73.8	73.0	70.8	68.1	69.0
77.5°	58.9	57.1	56.3	54.9	53.6
80°	44.0	43.5	42.6	41.3	40.4
82.5°	29.9	29.9	29.4	27.7	27.7
85°	18.0	17.6	17.1	15.8	15.4
87.5°	7.9	7.0	6.2	4.8	4.4
90°	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	18.16	19.77	18.52	20.08	20.40	17.71	19.33	18.08	19.64	19.95
	3H	19.91	21.36	20.29	21.69	22.05	19.42	20.87	19.79	21.20	21.56
	4H	20.55	21.92	20.95	22.27	22.65	20.06	21.43	20.46	21.78	22.15
	6H	21.02	22.29	21.43	22.66	23.05	20.52	21.79	20.93	22.15	22.55
	8H	21.17	22.38	21.59	22.77	23.17	20.66	21.87	21.09	22.26	22.66
	12H	21.26	22.42	21.69	22.80	23.23	20.74	21.90	21.17	22.29	22.71
4H	2H	18.72	20.09	19.12	20.44	20.81	18.37	19.74	18.76	20.08	20.46
	3H	20.69	21.84	21.10	22.24	22.64	20.29	21.43	20.70	21.83	22.23
	4H	21.47	22.51	21.90	22.92	23.36	21.05	22.08	21.48	22.50	22.93
	6H	22.07	22.97	22.52	23.41	23.87	21.63	22.54	22.09	22.98	23.44
	8H	22.26	23.10	22.72	23.55	24.01	21.82	22.66	22.28	23.11	23.57
	12H	22.39	23.15	22.87	23.62	24.09	21.94	22.70	22.42	23.17	23.64
8H	4H	21.74	22.59	22.20	23.03	23.50	21.37	22.22	21.83	22.66	23.12
	6H	22.46	23.16	22.95	23.65	24.12	22.08	22.78	22.57	23.27	23.74
	8H	22.72	23.35	23.23	23.85	24.34	22.32	22.96	22.83	23.46	23.95
	12H	22.92	23.48	23.42	23.97	24.53	22.50	23.06	23.01	23.55	24.11
12H	4H	21.77	22.53	22.25	23.01	23.48	21.41	22.17	21.89	22.64	23.11
	6H	22.50	23.14	23.01	23.64	24.13	22.13	22.77	22.64	23.27	23.76
	8H	22.82	23.37	23.32	23.87	24.43	22.44	23.00	22.95	23.49	24.05