

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: P998144

Luminaire Tested: SA2XXDIP-B290D330UB27-4F0-XX-W2A-F

Issue Date: 5/6/2025

Test Information

Test Method: LM-79-2019
Report Number: P998144
REPORT IS A COMBINATION OF REPORTS P983884 AND P1007351
Test Lab: INNOVATION CENTER
Issue Date: 5/6/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: SA2XXDIP-B290D330UB27-4F0-XX-W2A-F
Description: Define 2 Direct/Indirect Pendant with 2700K BioUP LEDs {m-DER=0.473} {m-EER=0.52}
Light Source: -
Ballast/Driver: -

Summary

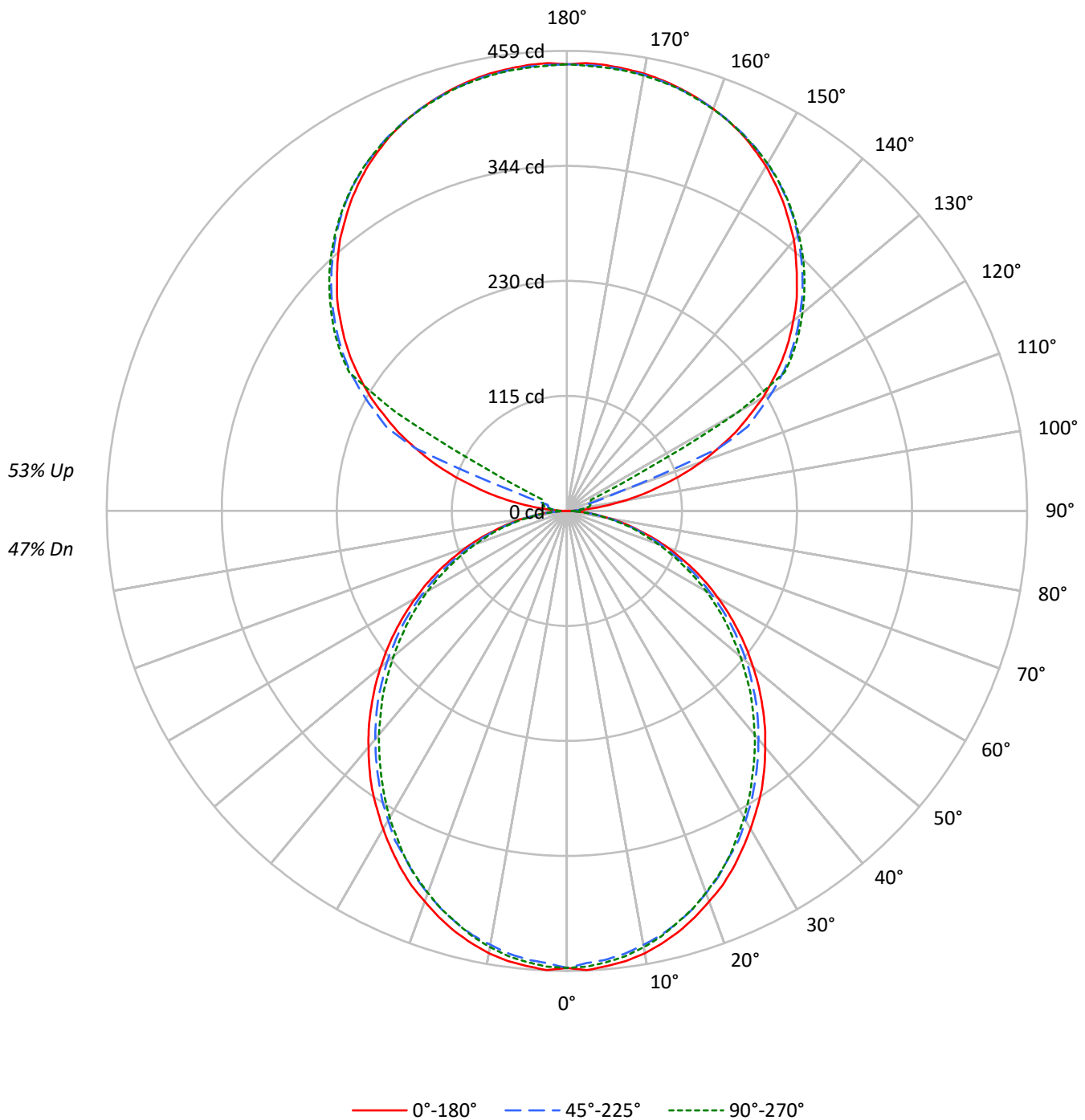
Lumens per Lamp: N/A
Luminaire Lumens: 2467.0 lumens
Efficiency: N/A
Efficacy: 110.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.1')
CIE Type: General Diffuse

Input Watts (W): 22.3
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	106	106	106	106	98	98	98	98	82	82	82	67	67	67	53	53	53
1	97	93	89	85	89	85	82	79	72	69	67	59	57	56	47	46	45
2	88	81	75	70	81	75	69	65	63	59	56	52	49	47	42	40	38
3	81	71	64	58	74	66	59	54	55	51	47	46	42	39	37	34	32
4	74	63	55	49	68	58	51	46	49	44	40	41	37	34	33	30	28
5	68	56	48	42	62	52	45	39	44	38	34	37	32	29	30	27	24
6	62	50	42	36	57	47	39	34	40	34	30	33	29	26	27	24	21
7	58	45	38	32	53	42	35	30	36	30	26	30	26	23	25	21	19
8	53	41	34	28	49	38	31	27	33	27	23	27	23	20	23	19	17
9	50	38	30	25	46	35	28	24	30	25	21	25	21	18	21	18	15
10	46	34	27	23	43	32	26	21	28	22	19	23	19	16	19	16	14

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7217	7217	7217
5°	7228	6880	6831
10°	7171	6566	6435
15°	7065	6250	6021
20°	6923	5907	5626
25°	6781	5548	5234
30°	6604	5210	4822
35°	6436	4855	4417
40°	6230	4503	4033
45°	6023	4155	3658
50°	5797	3801	3269
55°	5561	3422	2899
60°	5295	3012	2517
65°	5002	2595	2113
70°	4634	2139	1707
75°	4123	1649	1317
80°	3497	1120	847
85°	2543	521	360

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 6023 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	42.9	1.7
10°-20°	120.7	4.9
20°-30°	177.4	7.2
30°-40°	206.1	8.4
40°-50°	205.8	8.3
50°-60°	179.5	7.3
60°-70°	132.7	5.4
70°-80°	75.1	3.0
80°-90°	20.6	0.8
90°-100°	14.7	0.6
100°-110°	54.8	2.2
110°-120°	145.3	5.9
120°-130°	240.9	9.8
130°-140°	255.9	10.4
140°-150°	237.8	9.6
150°-160°	191.2	7.8
160°-170°	123.2	5.0
170°-180°	42.4	1.7
0°-30°	341.1	13.8
0°-40°	547.2	22.2
0°-60°	932.5	37.8
0°-90°	1160.8	47.1
90°-120°	214.7	8.7
90°-150°	949.4	38.5
90°-180°	1306.0	52.9
0°-180°	2467.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	456	456	456	456	456	
5°	456	454	449	453	452	43
15°	434	431	426	427	425	122
25°	393	389	382	383	382	181
35°	339	334	328	325	323	212
45°	276	273	266	261	260	213
55°	209	206	201	196	193	187
65°	141	138	134	130	128	139
75°	74	73	71	68	69	79
85°	18	18	17	16	15	20
90°	0	4	6	8	9	2
95°	21	10	13	14	14	25
105°	98	108	20	23	24	105
115°	185	191	199	50	26	183
125°	262	266	272	275	276	234
135°	324	330	332	336	335	251
145°	376	376	381	384	382	235
155°	414	411	415	417	415	191
165°	436	435	436	438	436	123
175°	446	444	445	447	444	42
180°	446	446	446	446	446	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	455.9	455.9	455.9	455.9	455.9
2.5°	458.6	456.4	451.6	455.9	455.1
5°	455.9	454.2	449.4	452.9	452.0
7.5°	452.9	450.2	445.4	448.9	448.1
10°	448.1	445.0	439.7	443.2	441.9
12.5°	441.5	438.8	433.6	435.8	434.9
15°	434.0	431.4	425.7	427.4	425.3
17.5°	424.8	422.2	416.5	418.7	416.5
20°	414.7	412.1	406.0	407.3	405.5
22.5°	404.7	400.7	395.0	395.0	394.1
25°	392.8	389.3	381.9	382.7	381.9
27.5°	379.7	376.6	370.9	369.6	367.4
30°	366.5	363.0	356.4	355.1	353.4
32.5°	352.5	349.9	342.8	340.2	338.5
35°	338.9	334.5	327.5	324.9	322.7
37.5°	323.5	319.6	312.6	309.5	307.3
40°	307.8	304.3	297.2	293.3	291.5
42.5°	292.4	288.9	281.9	277.5	274.9
45°	275.8	272.7	266.1	261.3	259.5
47.5°	259.5	256.5	249.5	244.6	242.0
50°	242.4	240.2	234.1	228.0	225.8
52.5°	225.8	222.7	217.0	212.2	209.1
55°	208.7	206.1	200.8	195.5	193.3
57.5°	191.6	189.4	183.7	178.4	176.7
60°	174.5	172.7	166.6	161.8	160.5
62.5°	157.8	154.8	150.4	146.0	144.2
65°	140.7	138.1	133.7	129.8	127.6
67.5°	123.2	121.0	117.1	114.0	112.2
70°	107.0	105.2	101.3	98.2	96.5
72.5°	90.3	88.6	86.4	83.3	82.0
75°	73.7	72.8	70.6	68.0	68.8
77.5°	58.7	57.0	56.1	54.8	53.5
80°	43.8	43.4	42.5	41.2	40.3
82.5°	29.8	29.8	29.4	27.6	27.6
85°	18.0	17.5	17.1	15.8	15.3
87.5°	7.9	7.0	6.1	4.8	4.4
90°	0.3	3.9	6.4	8.1	8.7
92.5°	8.1	6.8	7.7	8.4	8.7
95°	21.0	10.3	12.6	14.2	13.9
97.5°	37.7	11.3	16.4	17.4	17.7
100°	57.1	12.9	18.4	21.0	21.6
102.5°	78.3	77.7	19.0	22.6	23.5
105°	98.0	107.7	19.7	23.2	24.5
107.5°	120.9	129.0	20.3	23.9	25.1
110°	142.8	149.6	56.4	24.2	25.5



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	163.5	169.3	163.8	24.8	25.8
115°	185.4	190.9	198.9	49.6	26.4
117.5°	204.4	210.8	216.3	170.2	85.8
120°	225.7	230.5	236.3	240.2	196.7
122.5°	243.7	248.9	255.3	257.3	257.6
125°	262.1	266.3	272.4	274.7	275.7
127.5°	278.9	283.4	288.2	291.4	291.8
130°	294.7	299.8	303.4	306.9	306.6
132.5°	310.8	315.0	318.5	321.4	321.1
135°	324.3	329.5	332.4	335.6	335.0
137.5°	338.5	342.4	345.6	348.8	347.9
140°	352.4	355.0	358.5	361.4	359.8
142.5°	364.0	366.2	370.4	373.0	371.4
145°	376.2	375.9	381.4	383.7	382.0
147.5°	386.9	385.9	391.4	393.0	391.7
150°	397.2	394.9	400.1	402.0	400.4
152.5°	405.9	403.3	408.2	410.1	407.8
155°	414.3	411.4	415.3	417.2	414.6
157.5°	421.1	418.5	421.4	423.6	421.1
160°	426.9	424.9	426.9	428.8	426.5
162.5°	432.0	430.1	431.7	434.0	431.0
165°	436.5	434.6	435.6	437.8	435.6
167.5°	440.1	438.1	439.1	441.4	438.5
170°	443.0	441.0	441.7	443.9	441.0
172.5°	444.9	443.0	443.6	445.9	443.0
175°	446.5	444.3	444.9	447.2	443.9
177.5°	447.2	444.9	445.2	447.5	444.6
180°	445.6	445.6	445.6	445.6	445.6

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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	11.82	12.66	12.81	13.65	14.97	12.61	13.44	13.59	14.44	15.75
	3H	13.16	13.91	14.15	14.91	16.25	14.23	14.98	15.22	15.98	17.32
	4H	13.56	14.27	14.57	15.28	16.62	14.82	15.53	15.83	16.54	17.88
	6H	13.78	14.43	14.80	15.45	16.80	15.22	15.88	16.24	16.89	18.24
	8H	13.81	14.43	14.83	15.46	16.81	15.33	15.95	16.35	16.98	18.33
	12H	13.80	14.39	14.83	15.42	16.79	15.37	15.97	16.40	16.99	18.36
4H	2H	12.29	13.00	13.30	14.01	15.35	12.93	13.64	13.95	14.65	15.99
	3H	13.81	14.40	14.83	15.43	16.79	14.71	15.30	15.73	16.34	17.69
	4H	14.31	14.85	15.34	15.88	17.26	15.39	15.93	16.42	16.96	18.34
	6H	14.61	15.08	15.65	16.13	17.50	15.89	16.35	16.92	17.40	18.78
	8H	14.67	15.10	15.71	16.15	17.54	16.03	16.46	17.07	17.51	18.90
	12H	14.67	15.06	15.72	16.12	17.51	16.09	16.48	17.15	17.54	18.94
8H	4H	14.48	14.92	15.52	15.96	17.35	15.48	15.91	16.52	16.96	18.35
	6H	14.87	15.23	15.93	16.31	17.70	16.04	16.40	17.11	17.49	18.88
	8H	14.97	15.28	16.04	16.36	17.76	16.23	16.55	17.30	17.62	19.02
	12H	15.00	15.28	16.07	16.34	17.79	16.33	16.61	17.40	17.67	19.12
12H	4H	14.46	14.86	15.52	15.92	17.31	15.44	15.83	16.50	16.89	18.29
	6H	14.88	15.20	15.95	16.27	17.68	16.03	16.35	17.11	17.42	18.83
	8H	14.99	15.27	16.07	16.34	17.79	16.23	16.51	17.30	17.57	19.02