

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: P1055728

Luminaire Tested: S123R3DR-H1165D935-X4F0-XX-UDD-FLL-B

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2019
Report Number: P1055728
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-5)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123R3DR-H1165D935-X4F0-XX-UDD-FLL-B
Description: DEFINE 3, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

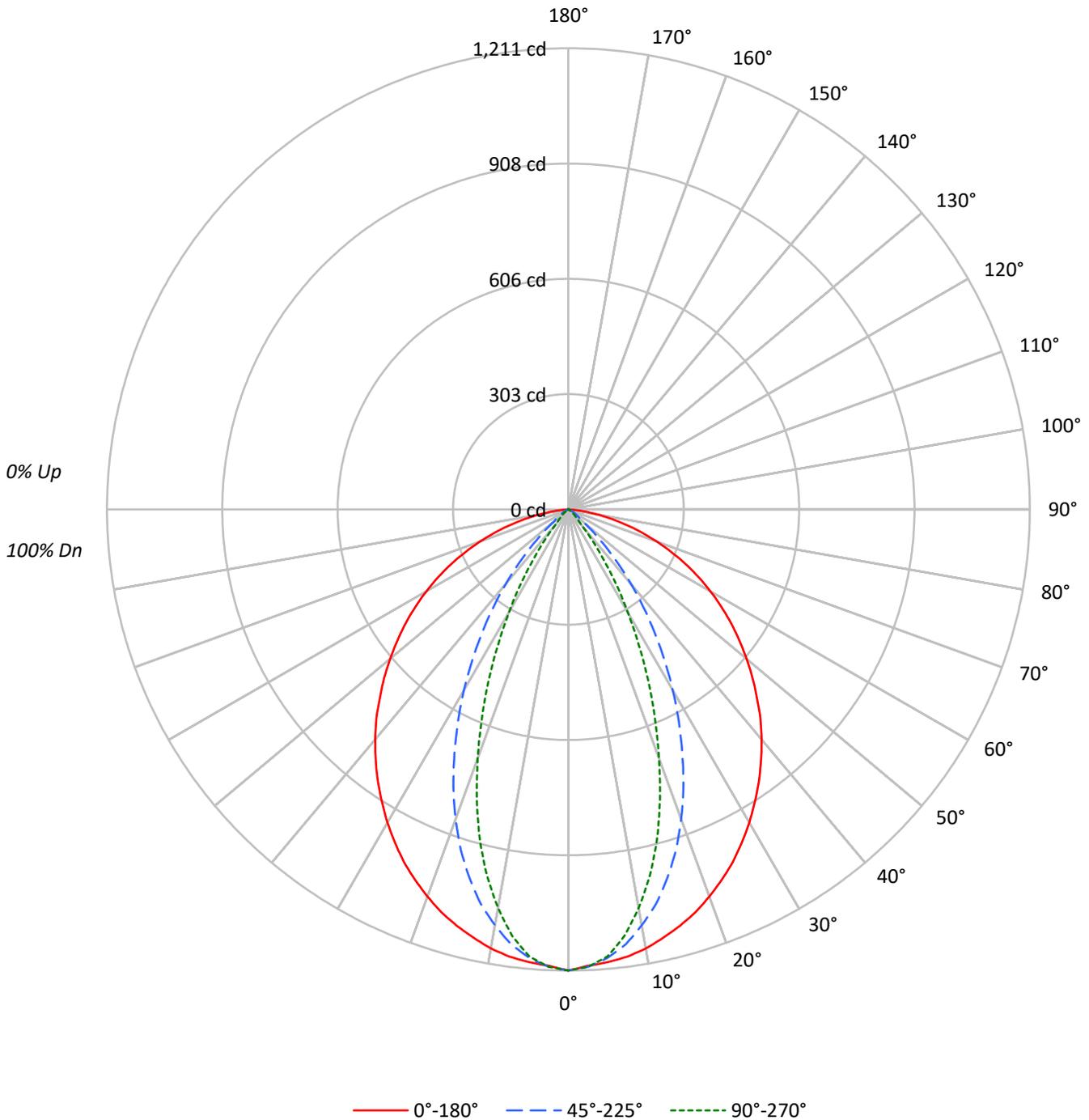
Lumens per Lamp: N/A
Luminaire Lumens: 1417.2 lumens
Efficiency: N/A
Efficacy: 38.7 lumens/watt
Spacing Criteria (0/90/45): 1.17 / 0.7 / 0.86
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 36.6
Input Voltage (V): 120
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	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	112	108	105	103	109	106	104	101	102	100	98	98	97	95	95	93	92	90
2	105	99	94	89	102	97	92	88	93	90	86	90	87	84	87	85	83	81
3	98	90	84	79	96	88	83	78	86	81	77	83	79	76	81	77	74	73
4	92	82	75	70	90	81	75	70	79	73	69	77	72	68	75	71	67	65
5	86	76	69	63	84	75	68	63	73	67	62	71	66	62	69	65	61	59
6	81	70	63	57	79	69	62	57	67	61	57	66	61	56	64	60	56	54
7	76	65	58	53	74	64	57	52	63	57	52	61	56	52	60	55	52	50
8	71	60	53	48	70	60	53	48	58	52	48	57	52	48	56	51	48	46
9	68	56	49	45	66	56	49	45	55	49	45	54	48	44	53	48	44	43
10	64	53	46	42	63	52	46	42	51	46	41	51	45	41	50	45	41	40

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	14599	14599	14599
5°	14442	14305	14259
10°	14332	13578	13010
15°	14126	12512	11210
20°	13876	11103	8929
25°	13585	9408	6584
30°	13220	7625	4320
35°	12830	5805	2367
40°	12415	4013	811
45°	11928	2334	471
50°	11451	919	283
55°	10958	580	132
60°	10388	364	60
65°	9674	180	37
70°	8679	88	46
75°	7374	61	61
80°	5492	90	0
85°	2089	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 11928 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	111.0	7.8
10°-20°	281.7	19.9
20°-30°	336.1	23.7
30°-40°	285.1	20.1
40°-50°	193.8	13.7
50°-60°	120.1	8.5
60°-70°	60.8	4.3
70°-80°	24.8	1.8
80°-90°	3.8	0.3
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°	728.8	51.4
0°-40°	1013.9	71.5
0°-60°	1327.7	93.7
0°-90°	1417.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1417.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1211	1211	1211	1211	1211	
5°	1193	1205	1182	1173	1178	113
15°	1132	1103	1002	923	898	319
25°	1021	926	707	546	495	470
35°	872	700	394	212	161	545
45°	700	458	137	34	28	540
55°	521	231	28	10	6	466
65°	339	56	6	1	1	335
75°	158	10	1	1	1	168
85°	15	0	0	1	0	27
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1210.9	1210.9	1210.9	1210.9	1210.9
2.5°	1199.6	1215.9	1202.1	1200.8	1202.1
5°	1193.3	1204.6	1182.0	1173.2	1178.2
7.5°	1184.5	1189.5	1151.8	1129.2	1129.2
10°	1170.7	1166.9	1109.1	1071.4	1062.7
12.5°	1151.8	1136.8	1061.4	1002.4	986.0
15°	1131.7	1102.8	1002.4	923.2	898.1
17.5°	1109.1	1065.2	938.3	835.3	798.9
20°	1081.5	1022.5	865.4	739.8	695.9
22.5°	1052.6	976.0	788.8	641.9	592.9
25°	1021.2	925.7	707.2	546.4	494.9
27.5°	986.0	873.0	626.8	454.7	398.2
30°	949.6	817.7	547.7	366.8	310.3
32.5°	910.7	759.9	468.5	286.4	233.6
35°	871.7	699.6	394.4	212.3	160.8
37.5°	830.3	639.4	322.8	147.0	101.7
40°	788.8	580.3	255.0	93.0	51.5
42.5°	746.1	518.8	193.4	46.5	35.2
45°	699.6	458.5	136.9	33.9	27.6
47.5°	655.7	400.7	90.4	27.6	21.4
50°	610.5	342.9	49.0	20.1	15.1
52.5°	565.2	287.6	35.2	15.1	10.0
55°	521.3	231.1	27.6	10.0	6.3
57.5°	476.1	182.1	21.4	6.3	3.8
60°	430.8	134.4	15.1	3.8	2.5
62.5°	385.6	93.0	10.0	2.5	1.3
65°	339.1	56.5	6.3	1.3	1.3
67.5°	291.4	38.9	3.8	1.3	1.3
70°	246.2	27.6	2.5	1.3	1.3
72.5°	201.0	17.6	1.3	1.3	0.0
75°	158.3	10.0	1.3	1.3	1.3
77.5°	116.8	3.8	1.3	1.3	0.0
80°	79.1	1.3	1.3	1.3	0.0
82.5°	44.0	0.0	1.3	1.3	0.0
85°	15.1	0.0	0.0	1.3	0.0
87.5°	0.0	0.0	0.0	1.3	0.0
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	18.36	19.64	18.73	19.95	20.27	0.00	0.00	0.00	0.00	0.00
	3H	20.31	21.44	20.69	21.77	22.14	0.00	0.00	0.00	0.00	0.00
	4H	21.13	22.19	21.54	22.54	22.93	0.00	0.00	0.00	0.00	0.00
	6H	21.69	22.66	22.10	23.03	23.42	0.00	0.00	0.00	0.00	0.00
	8H	21.81	22.73	22.24	23.12	23.53	0.00	0.00	0.00	0.00	0.00
	12H	21.84	22.71	22.27	23.10	23.53	0.00	0.00	0.00	0.00	0.00
4H	2H	18.12	19.18	18.53	19.53	19.92	0.00	0.00	0.00	0.00	0.00
	3H	20.08	20.94	20.49	21.34	21.75	0.00	0.00	0.00	0.00	0.00
	4H	20.89	21.66	21.33	22.08	22.53	0.00	0.00	0.00	0.00	0.00
	6H	21.49	22.16	21.96	22.60	23.07	0.00	0.00	0.00	0.00	0.00
	8H	21.65	22.26	22.12	22.71	23.18	0.00	0.00	0.00	0.00	0.00
	12H	21.69	22.24	22.18	22.72	23.20	0.00	0.00	0.00	0.00	0.00
8H	4H	20.75	21.37	21.22	21.81	22.29	0.00	0.00	0.00	0.00	0.00
	6H	21.33	21.83	21.84	22.33	22.81	0.00	0.00	0.00	0.00	0.00
	8H	21.48	21.93	22.00	22.45	22.94	0.00	0.00	0.00	0.00	0.00
	12H	21.54	21.93	22.05	22.43	23.00	0.00	0.00	0.00	0.00	0.00
12H	4H	20.70	21.25	21.19	21.73	22.20	0.00	0.00	0.00	0.00	0.00
	6H	21.27	21.72	21.79	22.23	22.73	0.00	0.00	0.00	0.00	0.00
	8H	21.44	21.83	21.95	22.33	22.90	0.00	0.00	0.00	0.00	0.00