

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2024 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1055600

Luminaire Tested: S123R3DR-S1165D950-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055600
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-6)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123R3DR-S1165D950-X4F0-XX-UDD-F-S
Description: DEFINE 3, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

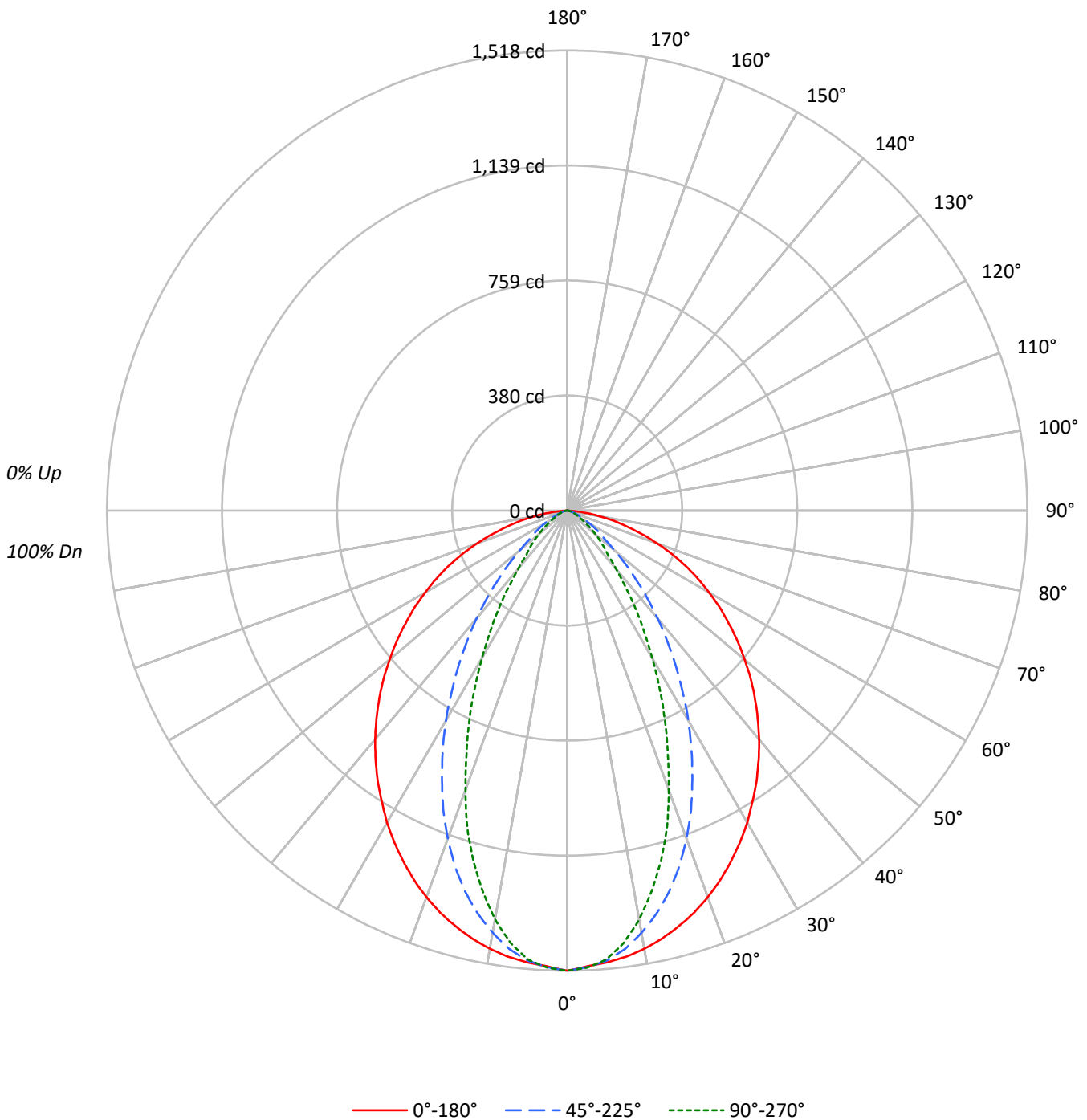
Lumens per Lamp: N/A
Luminaire Lumens: 2110.9 lumens
Efficiency: N/A
Efficacy: 50.4 lumens/watt
Spacing Criteria (0/90/45): 1.17 / 0.77 / 0.94
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 41.9
Input Voltage (V): 120
Input Current (A_{in}): 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	111	108	104	102	109	106	103	100	101	99	97	98	96	94	94	93	91	89
2	104	97	92	87	101	95	90	86	92	88	84	89	85	82	86	83	81	79
3	96	88	81	76	94	86	80	76	84	78	74	81	77	73	79	75	72	70
4	90	80	73	67	88	79	72	67	76	71	66	74	69	65	72	68	64	62
5	84	73	66	60	82	72	65	60	70	64	59	68	63	59	67	62	58	56
6	78	67	60	54	77	66	59	54	65	58	53	63	57	53	62	57	53	51
7	73	62	54	49	72	61	54	49	60	53	49	58	53	48	57	52	48	46
8	69	57	50	45	68	57	50	45	56	49	45	54	49	44	53	48	44	42
9	65	53	46	41	64	53	46	41	52	45	41	51	45	41	50	45	41	39
10	62	50	43	38	60	49	43	38	48	42	38	48	42	38	47	42	38	36

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	18300	18300	18300
5°	18109	18040	17988
10°	17967	17314	16768
15°	17725	16235	14923
20°	17408	14768	12571
25°	16996	12995	10145
30°	16544	11137	7811
35°	16031	9190	5781
40°	15512	7314	3939
45°	14940	5470	2968
50°	14330	3806	2320
55°	13701	2783	1694
60°	13045	2081	1215
65°	12273	1395	944
70°	11107	1015	761
75°	9582	736	601
80°	7693	597	500
85°	3984	595	401

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 14940 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	140.3	6.6
10°-20°	365.2	17.3
20°-30°	458.9	21.7
30°-40°	427.4	20.2
40°-50°	327.2	15.5
50°-60°	217.5	10.3
60°-70°	117.2	5.6
70°-80°	48.0	2.3
80°-90°	9.2	0.4
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°	964.4	45.7
0°-40°	1391.8	65.9
0°-60°	1936.5	91.7
0°-90°	2110.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2110.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1518	1518	1518	1518	1518	
5°	1496	1512	1491	1485	1486	142
15°	1420	1397	1301	1224	1196	400
25°	1278	1191	977	814	763	588
35°	1089	928	624	442	393	681
45°	876	647	321	188	174	676
55°	652	377	132	92	81	584
65°	430	145	49	36	33	425
75°	206	34	16	14	13	220
85°	29	4	4	4	3	42
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1517.9	1517.9	1517.9	1517.9	1517.9
2.5°	1505.0	1523.7	1507.8	1509.3	1509.3
5°	1496.3	1512.2	1490.6	1484.8	1486.3
7.5°	1484.8	1494.9	1458.9	1440.2	1437.3
10°	1467.6	1470.4	1414.3	1381.2	1369.7
12.5°	1446.0	1435.9	1362.5	1307.8	1286.3
15°	1420.1	1397.1	1300.7	1224.4	1195.6
17.5°	1391.3	1352.4	1230.2	1130.9	1096.3
20°	1356.8	1302.1	1151.0	1027.3	979.8
22.5°	1319.4	1248.9	1067.6	920.8	867.6
25°	1277.6	1191.3	976.9	814.3	762.6
27.5°	1234.5	1129.4	887.7	713.6	660.4
30°	1188.4	1066.1	800.0	615.8	561.1
32.5°	1138.1	997.1	709.3	525.2	470.5
35°	1089.2	928.0	624.4	441.7	392.8
37.5°	1037.4	858.9	542.4	368.3	313.7
40°	985.6	788.4	464.7	296.4	250.3
42.5°	930.9	717.9	391.3	236.0	200.0
45°	876.2	647.4	320.8	188.5	174.1
47.5°	821.5	576.9	259.0	162.6	148.2
50°	764.0	509.3	202.9	138.1	123.7
52.5°	709.3	441.7	158.3	113.7	100.7
55°	651.8	377.0	132.4	92.1	80.6
57.5°	598.5	310.8	109.3	71.9	63.3
60°	541.0	251.8	86.3	56.1	50.4
62.5°	486.3	197.1	66.2	44.6	40.3
65°	430.2	145.3	48.9	36.0	33.1
67.5°	374.1	105.0	37.4	28.8	27.3
70°	315.1	79.1	28.8	23.0	21.6
72.5°	259.0	56.1	21.6	18.7	17.3
75°	205.7	34.5	15.8	14.4	12.9
77.5°	158.3	20.1	11.5	11.5	10.1
80°	110.8	11.5	8.6	8.6	7.2
82.5°	67.6	7.2	5.8	5.8	5.8
85°	28.8	4.3	4.3	4.3	2.9
87.5°	4.3	1.4	1.4	1.4	1.4
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	19.91	21.27	20.28	21.58	21.90	8.48	9.84	8.85	10.15	10.47
	3H	21.67	22.87	22.05	23.20	23.56	9.15	10.35	9.53	10.68	11.05
	4H	22.37	23.49	22.77	23.84	24.22	9.34	10.47	9.75	10.82	11.20
	6H	22.88	23.91	23.29	24.28	24.68	9.46	10.50	9.88	10.87	11.26
	8H	23.02	24.00	23.45	24.39	24.79	9.50	10.48	9.93	10.87	11.27
	12H	23.07	24.01	23.50	24.39	24.82	9.51	10.45	9.94	10.83	11.26
4H	2H	19.72	20.85	20.12	21.20	21.58	9.04	10.16	9.44	10.51	10.90
	3H	21.51	22.43	21.93	22.84	23.24	9.84	10.76	10.25	11.16	11.57
	4H	22.21	23.03	22.64	23.45	23.89	10.10	10.92	10.53	11.34	11.78
	6H	22.78	23.49	23.24	23.93	24.40	10.29	11.01	10.76	11.45	11.92
	8H	22.95	23.62	23.42	24.06	24.53	10.35	11.01	10.82	11.46	11.93
	12H	23.04	23.63	23.53	24.11	24.58	10.38	10.97	10.87	11.45	11.93
8H	4H	22.08	22.75	22.55	23.19	23.66	10.41	11.07	10.88	11.52	11.99
	6H	22.64	23.18	23.14	23.68	24.16	10.66	11.20	11.16	11.70	12.18
	8H	22.81	23.30	23.34	23.81	24.31	10.75	11.23	11.27	11.75	12.24
	12H	22.92	23.35	23.43	23.84	24.41	10.83	11.26	11.34	11.75	12.32
12H	4H	22.04	22.63	22.53	23.11	23.58	10.46	11.04	10.94	11.52	12.00
	6H	22.58	23.07	23.10	23.58	24.07	10.70	11.19	11.22	11.70	12.20
	8H	22.78	23.20	23.29	23.70	24.27	10.83	11.26	11.35	11.75	12.33