

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: P1055579

Luminaire Tested: S123R3DR-S1165D835-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055579
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-S1165D835-X4F0-XX-UDD-F-S
Description: DEFINE 3, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

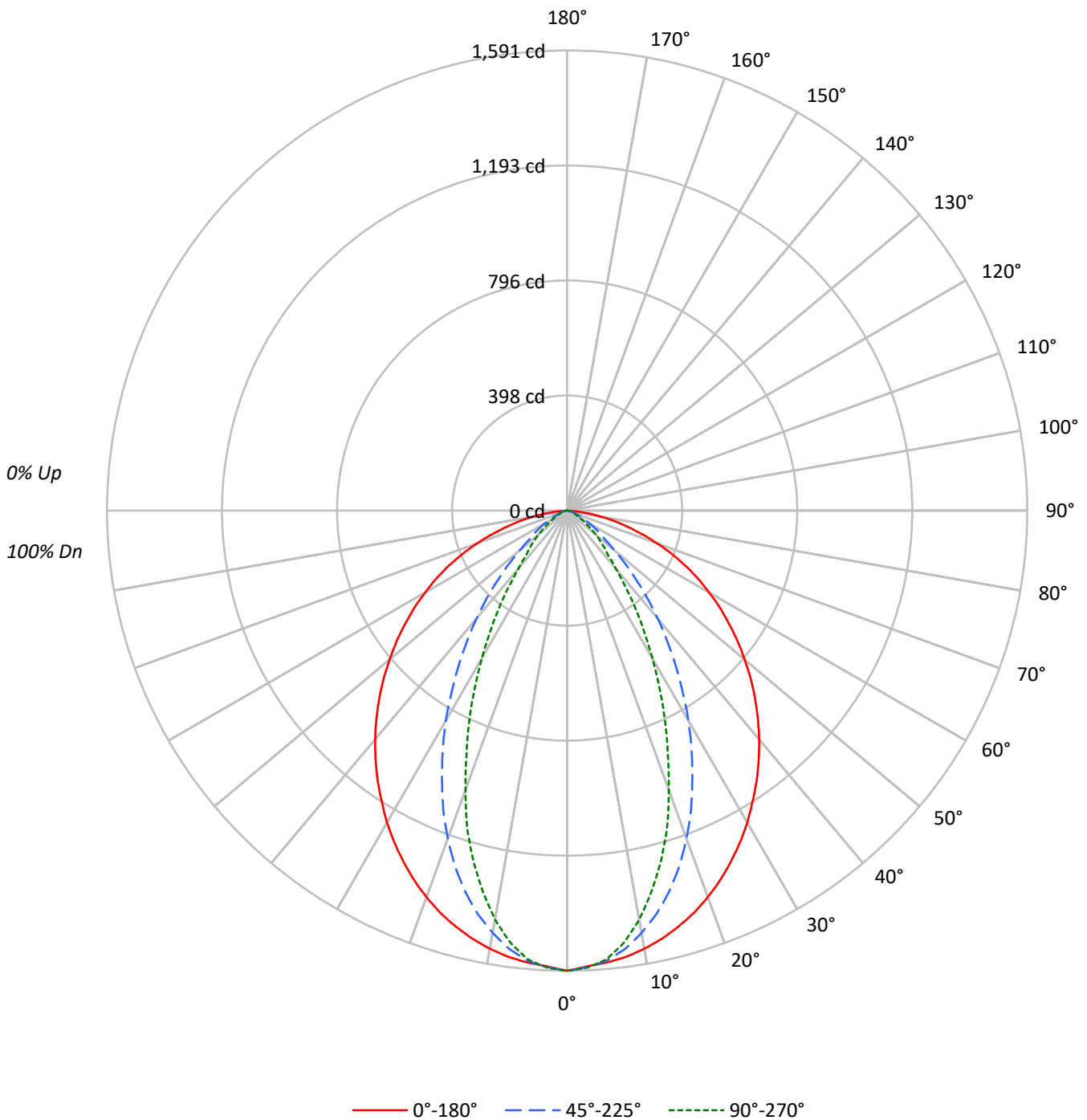
Lumens per Lamp: N/A
Luminaire Lumens: 2212.7 lumens
Efficiency: N/A
Efficacy: 52.8 lumens/watt
Spacing Criteria (0/90/45): 1.17 / 0.77 / 0.94
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 41.9
Input Voltage (V): 120
Input Current (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	50	30	10	0	
RCR																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				100
1	111	108	104	102	109	106	103	100	101	99	97	98	96	94	94	93	91	89				89
2	104	97	92	87	101	95	90	86	92	88	84	89	85	82	86	83	81	79				79
3	96	88	81	76	94	86	80	76	84	78	74	81	77	73	79	75	72	70				70
4	90	80	73	67	88	79	72	67	76	71	66	74	69	65	72	68	64	62				62
5	84	73	66	60	82	72	65	60	70	64	59	68	63	59	67	62	58	56				56
6	78	67	60	54	77	66	59	54	65	58	53	63	57	53	62	57	53	51				51
7	73	62	54	49	72	61	54	49	60	53	49	58	53	48	57	52	48	46				46
8	69	57	50	45	68	57	50	45	56	49	45	54	49	44	53	48	44	42				42
9	65	53	46	41	64	53	46	41	52	45	41	51	45	41	50	45	41	39				39
10	62	50	43	38	60	49	43	38	48	42	38	48	42	38	47	42	38	36				36

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	19183	19183	19183
5°	18983	18909	18854
10°	18832	18149	17578
15°	18579	17018	15643
20°	18247	15480	13178
25°	17815	13622	10633
30°	17342	11673	8189
35°	16804	9633	6059
40°	16259	7666	4130
45°	15661	5734	3112
50°	15020	3988	2433
55°	14361	2915	1776
60°	13674	2182	1273
65°	12863	1463	990
70°	11643	1065	797
75°	10048	773	634
80°	8061	625	521
85°	4178	622	415

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 15661 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	147.1	6.6
10°-20°	382.9	17.3
20°-30°	481.0	21.7
30°-40°	448.0	20.2
40°-50°	343.0	15.5
50°-60°	227.9	10.3
60°-70°	122.9	5.6
70°-80°	50.3	2.3
80°-90°	9.6	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°	1010.9	45.7
0°-40°	1459.0	65.9
0°-60°	2029.9	91.7
0°-90°	2212.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2212.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1591	1591	1591	1591	1591	
5°	1568	1585	1562	1556	1558	149
15°	1488	1464	1363	1283	1253	419
25°	1339	1249	1024	854	799	617
35°	1142	973	654	463	412	714
45°	918	679	336	198	182	709
55°	683	395	139	96	84	612
65°	451	152	51	38	35	446
75°	216	36	17	15	14	231
85°	30	4	4	4	3	44
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1591.1	1591.1	1591.1	1591.1	1591.1
2.5°	1577.5	1597.1	1580.5	1582.0	1582.0
5°	1568.5	1585.1	1562.4	1556.4	1557.9
7.5°	1556.4	1567.0	1529.3	1509.7	1506.6
10°	1538.3	1541.3	1482.5	1447.8	1435.8
12.5°	1515.7	1505.1	1428.2	1370.9	1348.3
15°	1488.5	1464.4	1363.4	1283.4	1253.3
17.5°	1458.4	1417.7	1289.5	1185.4	1149.2
20°	1422.2	1364.9	1206.5	1076.8	1027.1
22.5°	1383.0	1309.1	1119.0	965.2	909.4
25°	1339.2	1248.7	1024.0	853.6	799.3
27.5°	1294.0	1183.9	930.5	748.0	692.2
30°	1245.7	1117.5	838.5	645.5	588.2
32.5°	1192.9	1045.1	743.5	550.5	493.2
35°	1141.7	972.8	654.5	463.0	411.7
37.5°	1087.4	900.4	568.6	386.1	328.8
40°	1033.1	826.5	487.1	310.7	262.4
42.5°	975.8	752.6	410.2	247.3	209.6
45°	918.5	678.7	336.3	197.6	182.5
47.5°	861.2	604.8	271.5	170.4	155.3
50°	800.8	533.9	212.6	144.8	129.7
52.5°	743.5	463.0	165.9	119.1	105.6
55°	683.2	395.1	138.7	96.5	84.5
57.5°	627.4	325.8	114.6	75.4	66.4
60°	567.1	263.9	90.5	58.8	52.8
62.5°	509.8	206.6	69.4	46.8	42.2
65°	450.9	152.3	51.3	37.7	34.7
67.5°	392.1	110.1	39.2	30.2	28.7
70°	330.3	82.9	30.2	24.1	22.6
72.5°	271.5	58.8	22.6	19.6	18.1
75°	215.7	36.2	16.6	15.1	13.6
77.5°	165.9	21.1	12.1	12.1	10.6
80°	116.1	12.1	9.0	9.0	7.5
82.5°	70.9	7.5	6.0	6.0	6.0
85°	30.2	4.5	4.5	4.5	3.0
87.5°	4.5	1.5	1.5	1.5	1.5
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	20.08	21.43	20.44	21.75	22.06	8.65	10.01	9.01	10.32	10.63
	3H	21.83	23.03	22.21	23.36	23.73	9.31	10.52	9.69	10.85	11.21
	4H	22.53	23.65	22.93	24.00	24.39	9.51	10.63	9.91	10.98	11.37
	6H	23.04	24.08	23.46	24.45	24.84	9.63	10.67	10.05	11.04	11.43
	8H	23.18	24.16	23.61	24.55	24.96	9.67	10.65	10.10	11.04	11.44
	12H	23.23	24.17	23.67	24.55	24.98	9.68	10.61	10.11	10.99	11.42
4H	2H	19.88	21.01	20.29	21.36	21.74	9.21	10.33	9.61	10.68	11.06
	3H	21.68	22.60	22.09	23.00	23.40	10.01	10.93	10.42	11.33	11.73
	4H	22.37	23.20	22.81	23.61	24.06	10.26	11.09	10.70	11.51	11.95
	6H	22.94	23.65	23.40	24.10	24.56	10.46	11.17	10.92	11.62	12.08
	8H	23.12	23.78	23.59	24.23	24.70	10.51	11.18	10.98	11.62	12.09
	12H	23.20	23.79	23.69	24.27	24.75	10.55	11.13	11.03	11.61	12.09
8H	4H	22.25	22.91	22.72	23.36	23.83	10.58	11.24	11.05	11.69	12.16
	6H	22.80	23.34	23.30	23.84	24.32	10.83	11.37	11.33	11.86	12.34
	8H	22.98	23.46	23.50	23.98	24.47	10.91	11.40	11.43	11.91	12.40
	12H	23.08	23.51	23.60	24.01	24.58	10.99	11.42	11.50	11.91	12.48
12H	4H	22.21	22.79	22.69	23.27	23.75	10.62	11.21	11.11	11.69	12.17
	6H	22.74	23.23	23.27	23.74	24.24	10.87	11.36	11.39	11.87	12.36
	8H	22.94	23.37	23.45	23.86	24.43	11.00	11.42	11.51	11.92	12.49