

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: P1055549

Luminaire Tested: S123R3DR-S1000D830-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055549
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-S1000D830-X4F0-XX-UDD-F-S
Description: DEFINE 3, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

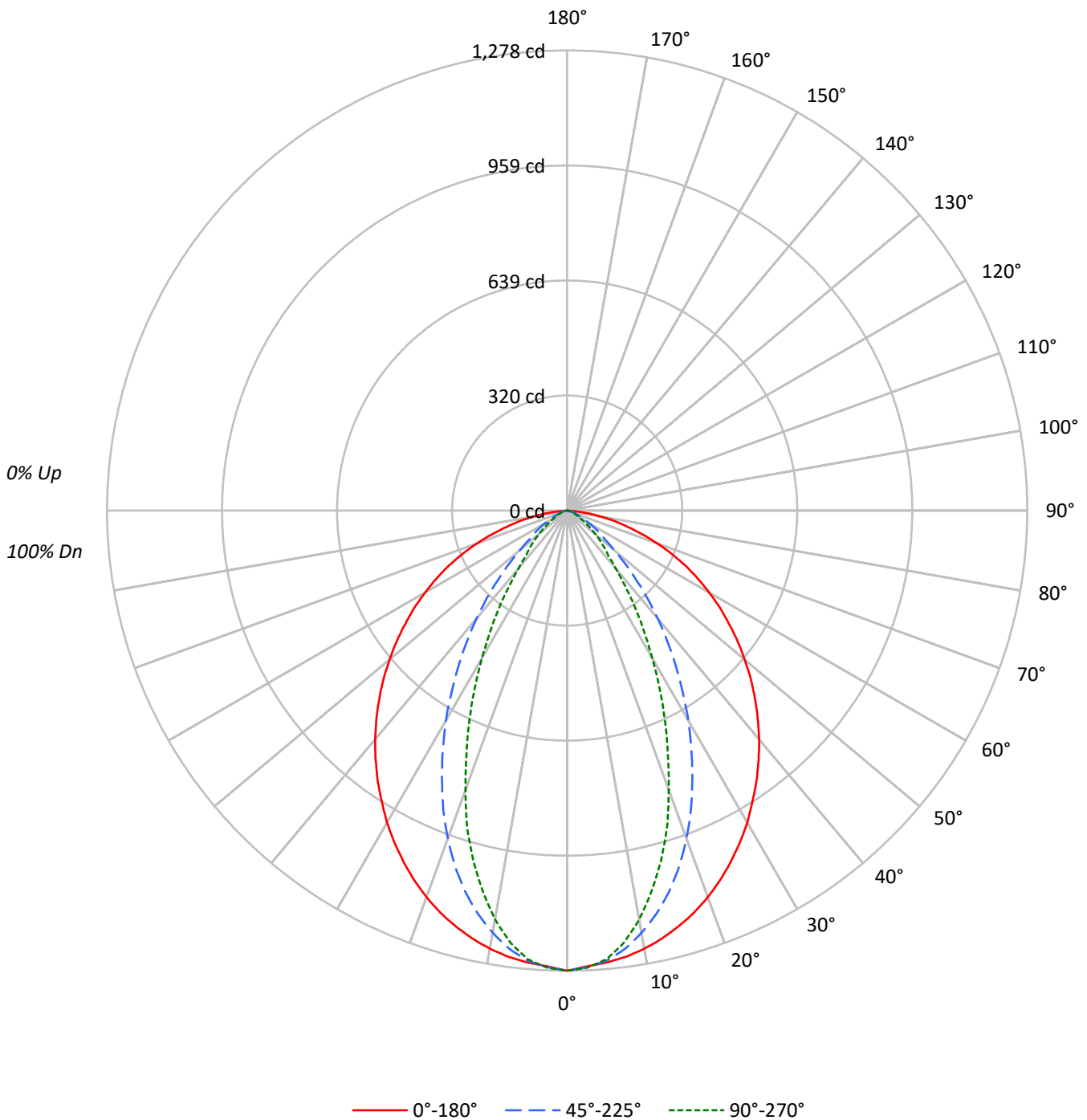
Lumens per Lamp: N/A
Luminaire Lumens: 1777.1 lumens
Efficiency: N/A
Efficacy: 51.2 lumens/watt
Spacing Criteria (0/90/45): 1.17 / 0.77 / 0.94
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 34.7
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	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°	15406	15406	15406
5°	15245	15186	15143
10°	15124	14576	14117
15°	14922	13666	12563
20°	14655	12432	10582
25°	14308	10940	8539
30°	13928	9375	6577
35°	13495	7737	4867
40°	13058	6157	3318
45°	12576	4605	2500
50°	12064	3204	1954
55°	11534	2342	1425
60°	10981	1753	1022
65°	10333	1175	796
70°	9352	853	642
75°	8068	620	508
80°	6478	507	424
85°	3348	498	332

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 12576 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	118.1	6.6
10°-20°	307.5	17.3
20°-30°	386.3	21.7
30°-40°	359.8	20.2
40°-50°	275.4	15.5
50°-60°	183.1	10.3
60°-70°	98.7	5.6
70°-80°	40.4	2.3
80°-90°	7.7	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°	811.9	45.7
0°-40°	1171.7	65.9
0°-60°	1630.2	91.7
0°-90°	1777.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1777.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1278	1278	1278	1278	1278	
5°	1260	1273	1255	1250	1251	120
15°	1196	1176	1095	1031	1006	337
25°	1076	1003	822	686	642	495
35°	917	781	526	372	331	573
45°	738	545	270	159	147	569
55°	549	317	111	78	68	492
65°	362	122	41	30	28	358
75°	173	29	13	12	11	185
85°	24	4	4	4	2	36
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1277.8	1277.8	1277.8	1277.8	1277.8
2.5°	1266.9	1282.7	1269.4	1270.6	1270.6
5°	1259.7	1273.0	1254.8	1250.0	1251.2
7.5°	1250.0	1258.5	1228.2	1212.4	1210.0
10°	1235.4	1237.9	1190.6	1162.8	1153.1
12.5°	1217.3	1208.8	1147.0	1101.0	1082.8
15°	1195.5	1176.1	1094.9	1030.8	1006.5
17.5°	1171.3	1138.6	1035.6	952.0	923.0
20°	1142.2	1096.2	969.0	864.8	824.8
22.5°	1110.7	1051.3	898.7	775.2	730.4
25°	1075.6	1002.9	822.4	685.6	641.9
27.5°	1039.2	950.8	747.3	600.8	556.0
30°	1000.5	897.5	673.4	518.4	472.4
32.5°	958.1	839.4	597.1	442.1	396.1
35°	916.9	781.2	525.7	371.8	330.7
37.5°	873.3	723.1	456.6	310.1	264.0
40°	829.7	663.8	391.2	249.5	210.8
42.5°	783.7	604.4	329.5	198.6	168.4
45°	737.6	545.1	270.1	158.7	146.6
47.5°	691.6	485.7	218.0	136.9	124.8
50°	643.2	428.8	170.8	116.3	104.2
52.5°	597.1	371.8	133.2	95.7	84.8
55°	548.7	317.3	111.4	77.5	67.8
57.5°	503.9	261.6	92.1	60.6	53.3
60°	455.4	212.0	72.7	47.2	42.4
62.5°	409.4	165.9	55.7	37.5	33.9
65°	362.2	122.3	41.2	30.3	27.9
67.5°	314.9	88.4	31.5	24.2	23.0
70°	265.3	66.6	24.2	19.4	18.2
72.5°	218.0	47.2	18.2	15.7	14.5
75°	173.2	29.1	13.3	12.1	10.9
77.5°	133.2	17.0	9.7	9.7	8.5
80°	93.3	9.7	7.3	7.3	6.1
82.5°	56.9	6.1	4.8	4.8	4.8
85°	24.2	3.6	3.6	3.6	2.4
87.5°	3.6	1.2	1.2	1.2	1.2
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	19.31	20.67	19.68	20.98	21.30	7.89	9.25	8.26	9.56	9.88
	3H	21.07	22.27	21.45	22.60	22.97	8.55	9.76	8.93	10.09	10.45
	4H	21.77	22.89	22.17	23.24	23.62	8.75	9.87	9.15	10.22	10.61
	6H	22.28	23.31	22.69	23.68	24.08	8.87	9.91	9.29	10.27	10.67
	8H	22.42	23.40	22.85	23.79	24.19	8.91	9.89	9.34	10.28	10.68
	12H	22.47	23.41	22.90	23.79	24.22	8.92	9.85	9.35	10.23	10.66
4H	2H	19.12	20.25	19.52	20.60	20.98	8.45	9.57	8.85	9.92	10.30
	3H	20.91	21.84	21.33	22.24	22.64	9.25	10.17	9.66	10.57	10.97
	4H	21.61	22.43	22.04	22.85	23.29	9.50	10.33	9.94	10.74	11.19
	6H	22.18	22.89	22.64	23.34	23.80	9.70	10.41	10.16	10.86	11.32
	8H	22.36	23.02	22.82	23.46	23.94	9.75	10.42	10.22	10.86	11.33
	12H	22.44	23.03	22.93	23.51	23.98	9.79	10.37	10.27	10.85	11.33
8H	4H	21.49	22.15	21.95	22.60	23.07	9.82	10.48	10.28	10.93	11.40
	6H	22.04	22.58	22.54	23.08	23.56	10.07	10.61	10.57	11.10	11.58
	8H	22.22	22.70	22.74	23.22	23.71	10.15	10.64	10.67	11.15	11.64
	12H	22.32	22.75	22.84	23.24	23.81	10.23	10.66	10.74	11.15	11.72
12H	4H	21.44	22.03	21.93	22.51	22.99	9.86	10.45	10.35	10.93	11.40
	6H	21.98	22.47	22.50	22.98	23.47	10.11	10.60	10.63	11.11	11.60
	8H	22.18	22.61	22.69	23.10	23.67	10.24	10.66	10.75	11.16	11.73