

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: P1059417

Luminaire Tested: S123RDR-H1000D830-X4F0-XX-UDD-WVL-W

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059417
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-64)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDR-H1000D830-X4F0-XX-UDD-WVL-W
Description: DEFINE 3 WHITE REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE
LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

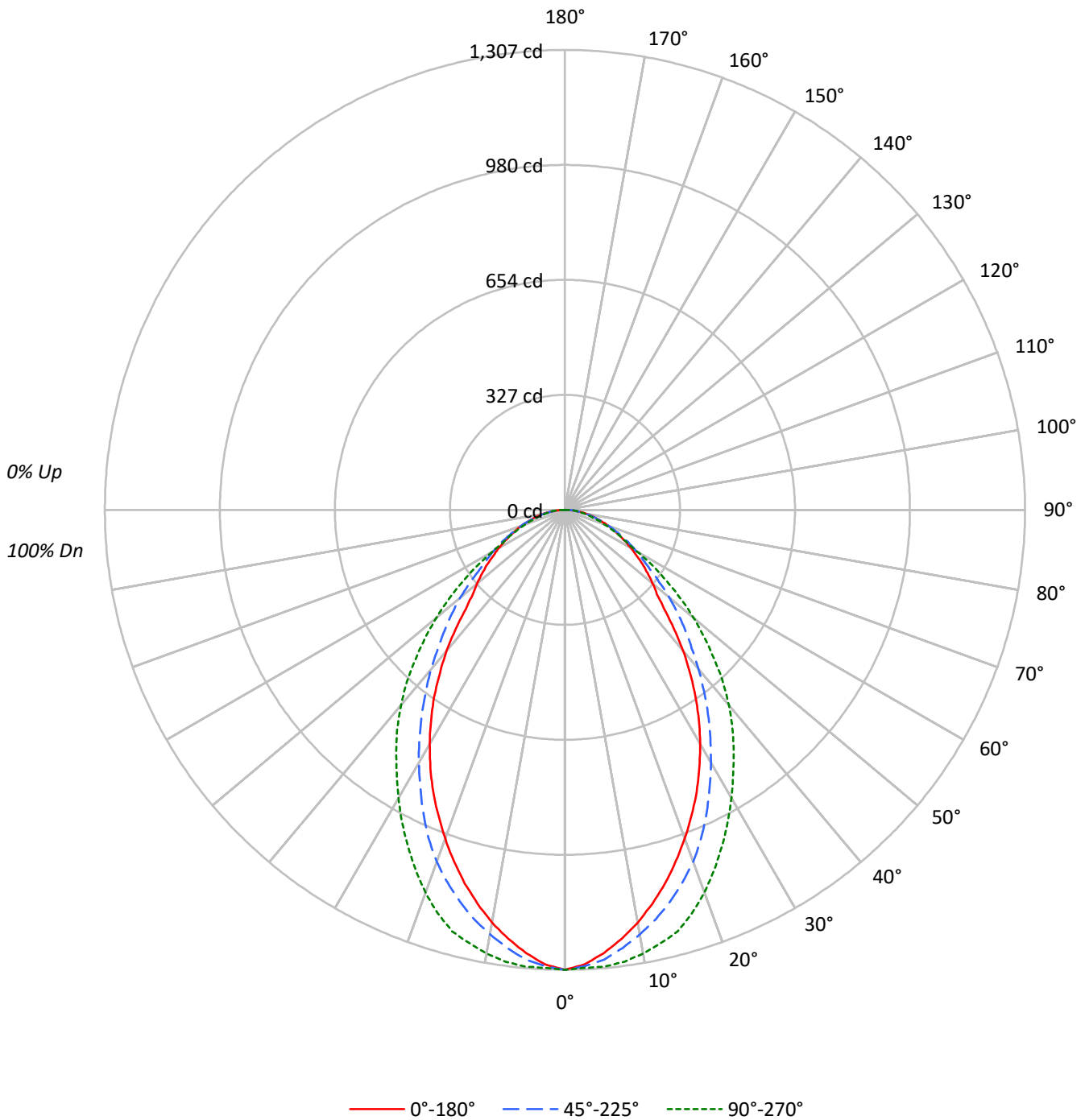
Lumens per Lamp: N/A
Luminaire Lumens: 2297.0 lumens
Efficiency: N/A
Efficacy: 73.6 lumens/watt
Spacing Criteria (0/90/45): 0.94 / 1.1 / 1.09
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 31.2
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				
1	110	106	102	99	108	104	101	97	100	97	94	96	94	92	92	91	89	87				
2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77	75				
3	94	85	77	72	92	83	76	71	80	75	70	78	73	69	75	71	68	66				
4	87	76	69	63	85	75	68	62	73	66	61	70	65	61	68	64	60	58				
5	81	69	61	55	79	68	61	55	66	59	54	64	58	54	62	57	53	51				
6	75	63	55	49	73	62	55	49	61	54	49	59	53	48	57	52	48	46				
7	70	58	50	44	69	57	50	44	56	49	44	54	48	44	53	48	43	41				
8	66	53	46	40	64	53	45	40	51	45	40	50	44	40	49	44	39	38				
9	62	49	42	37	60	49	42	37	48	41	36	47	41	36	46	40	36	34				
10	58	46	39	34	57	45	38	34	45	38	34	44	38	33	43	37	33	32				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	15350	15350	15350
5°	14905	15117	15355
10°	14205	14608	15265
15°	13361	14018	15071
20°	12427	13298	14465
25°	11470	12331	13672
30°	10417	11257	12828
35°	9273	10159	11981
40°	8002	9053	11106
45°	6613	8014	9957
50°	5939	7070	8694
55°	5505	6033	7208
60°	5073	5495	5521
65°	4721	4971	4626
70°	4443	4518	4055
75°	4183	4033	3571
80°	3956	3652	3347
85°	3786	4096	3786

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 9957 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	121.1	5.3
10°-20°	326.2	14.2
20°-30°	441.3	19.2
30°-40°	453.4	19.7
40°-50°	380.8	16.6
50°-60°	273.0	11.9
60°-70°	173.8	7.6
70°-80°	95.5	4.2
80°-90°	31.8	1.4
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°	888.5	38.7
0°-40°	1341.9	58.4
0°-60°	1995.8	86.9
0°-90°	2297.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2297.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1307	1307	1307	1307	1307	
5°	1264	1287	1282	1292	1303	118
15°	1099	1130	1153	1203	1240	308
25°	885	919	952	1004	1055	406
35°	647	682	709	772	836	403
45°	398	433	483	552	600	314
55°	269	274	295	334	352	240
65°	170	180	179	169	166	169
75°	92	101	89	82	79	98
85°	28	29	30	32	28	31
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1307.2	1307.2	1307.2	1307.2	1307.2
2.5°	1292.6	1310.6	1298.2	1299.3	1302.7
5°	1264.5	1287.0	1282.5	1291.5	1302.7
7.5°	1229.6	1254.3	1255.5	1276.8	1294.8
10°	1191.3	1217.2	1225.1	1257.7	1280.2
12.5°	1146.3	1174.5	1191.3	1231.8	1261.1
15°	1099.1	1129.5	1153.1	1202.6	1239.7
17.5°	1047.3	1080.0	1110.3	1163.2	1201.5
20°	994.5	1029.3	1064.2	1113.7	1157.6
22.5°	939.3	975.3	1011.3	1059.7	1108.1
25°	885.3	919.1	951.7	1003.5	1055.2
27.5°	826.8	861.7	889.8	947.2	1001.2
30°	768.3	803.2	830.2	889.8	946.1
32.5°	707.6	743.6	768.3	830.2	888.7
35°	646.9	681.7	708.7	771.7	835.8
37.5°	582.7	621.0	648.0	718.8	781.8
40°	522.0	558.0	590.6	664.9	724.5
42.5°	459.0	496.1	533.2	609.7	664.9
45°	398.2	433.1	482.6	552.4	599.6
47.5°	354.4	376.9	434.2	492.7	537.7
50°	325.1	334.1	387.0	438.7	475.9
52.5°	295.9	302.6	338.6	385.9	414.0
55°	268.9	274.5	294.7	334.1	352.1
57.5°	239.6	245.2	262.1	284.6	294.7
60°	216.0	220.5	234.0	237.4	235.1
62.5°	192.4	199.1	205.9	198.0	194.6
65°	169.9	180.0	178.9	168.7	166.5
67.5°	149.6	159.7	154.1	144.0	140.6
70°	129.4	139.5	131.6	121.5	118.1
72.5°	110.2	121.5	109.1	100.1	97.9
75°	92.2	101.2	88.9	82.1	78.7
77.5°	75.4	82.1	70.9	65.2	63.0
80°	58.5	63.0	54.0	50.6	49.5
82.5°	42.7	45.0	39.4	41.6	40.5
85°	28.1	29.2	30.4	31.5	28.1
87.5°	13.5	19.1	19.1	18.0	14.6
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	16.67	18.14	17.04	18.45	18.76	17.74	19.21	18.11	19.52	19.83
	3H	18.37	19.68	18.75	20.01	20.37	18.83	20.14	19.21	20.47	20.83
	4H	19.02	20.25	19.42	20.60	20.98	19.23	20.46	19.63	20.81	21.19
	6H	19.53	20.66	19.94	21.03	21.42	19.54	20.67	19.95	21.04	21.43
	8H	19.70	20.78	20.13	21.17	21.57	19.67	20.75	20.10	21.14	21.54
	12H	19.82	20.86	20.26	21.24	21.67	19.79	20.83	20.22	21.21	21.64
4H	2H	17.27	18.50	17.68	18.85	19.23	18.15	19.37	18.55	19.72	20.10
	3H	19.20	20.22	19.61	20.62	21.02	19.46	20.48	19.88	20.88	21.29
	4H	20.01	20.93	20.45	21.35	21.79	19.98	20.90	20.42	21.32	21.76
	6H	20.66	21.46	21.12	21.90	22.36	20.42	21.21	20.87	21.66	22.12
	8H	20.88	21.63	21.35	22.07	22.54	20.61	21.35	21.07	21.79	22.26
	12H	21.06	21.72	21.54	22.20	22.67	20.79	21.45	21.27	21.93	22.40
8H	4H	20.25	21.00	20.72	21.44	21.91	20.23	20.97	20.69	21.42	21.89
	6H	21.04	21.65	21.54	22.15	22.62	20.78	21.39	21.27	21.88	22.36
	8H	21.35	21.90	21.87	22.42	22.90	21.05	21.61	21.57	22.12	22.61
	12H	21.62	22.11	22.13	22.60	23.17	21.35	21.83	21.86	22.33	22.89
12H	4H	20.26	20.93	20.75	21.41	21.88	20.26	20.92	20.74	21.40	21.87
	6H	21.07	21.63	21.59	22.14	22.63	20.83	21.38	21.34	21.89	22.38
	8H	21.45	21.94	21.96	22.43	23.00	21.17	21.66	21.68	22.15	22.72