

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: P1059435

Luminaire Tested: S123RDR-H1000D840-X4F0-XX-UDD-WVL-W

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059435
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-H1000D840-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: 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

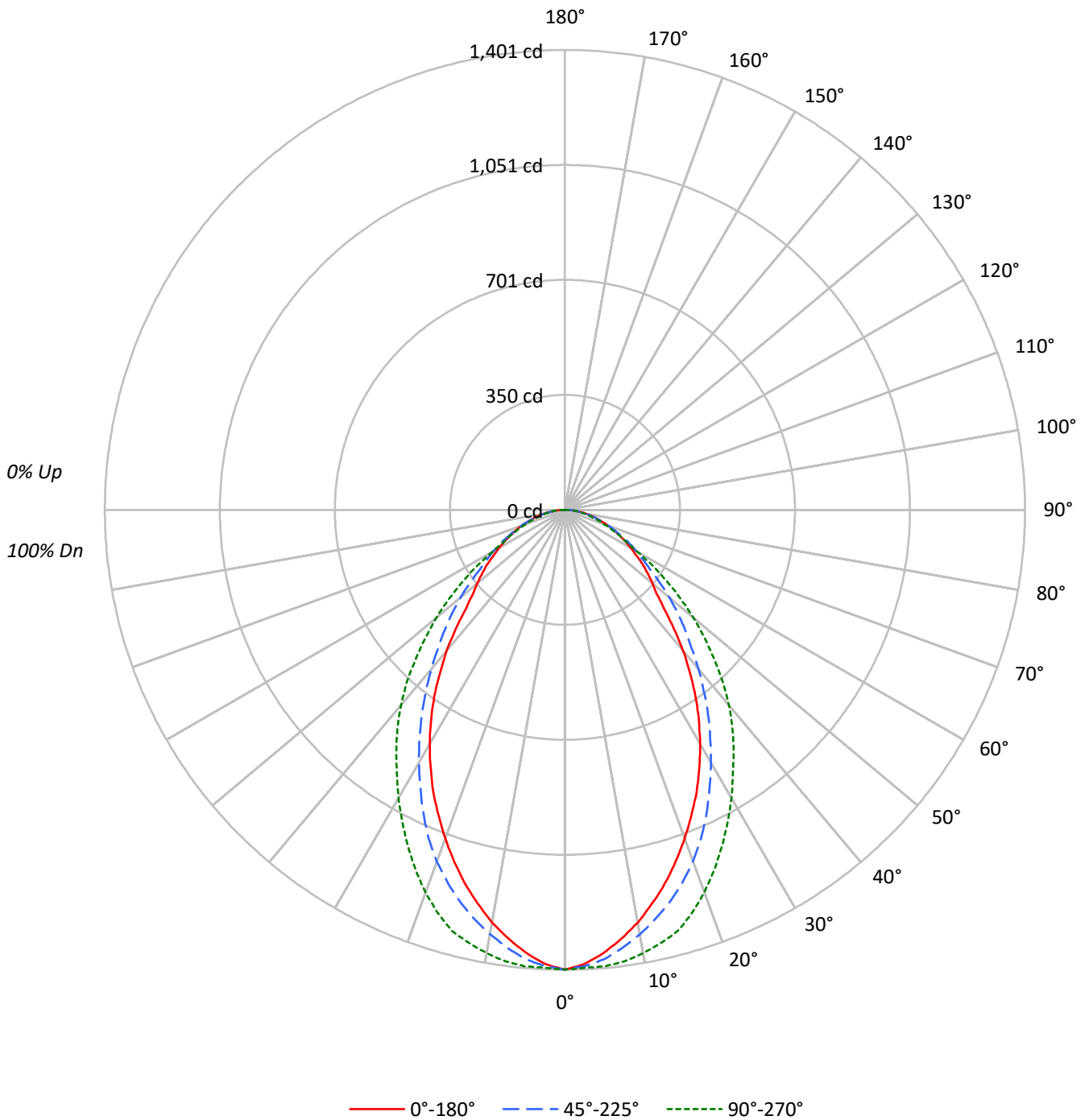
Lumens per Lamp: N/A
Luminaire Lumens: 2461.1 lumens
Efficiency: N/A
Efficacy: 78.9 lumens/watt
Spacing Criteria (0/90/45): 0.94 / 1.1 / 1.09
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

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°	16446	16446	16446
5°	15969	16197	16453
10°	15219	15651	16354
15°	14316	15018	16148
20°	13315	14248	15499
25°	12290	13212	14648
30°	11162	12061	13745
35°	9935	10884	12837
40°	8573	9700	11898
45°	7086	8587	10668
50°	6363	7574	9313
55°	5898	6465	7724
60°	5434	5888	5916
65°	5057	5324	4957
70°	4758	4841	4347
75°	4482	4319	3829
80°	4240	3915	3584
85°	4055	4379	4055

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 10668 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	129.7	5.3
10°-20°	349.5	14.2
20°-30°	472.8	19.2
30°-40°	485.8	19.7
40°-50°	408.0	16.6
50°-60°	292.5	11.9
60°-70°	186.3	7.6
70°-80°	102.3	4.2
80°-90°	34.1	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°	952.0	38.7
0°-40°	1437.8	58.4
0°-60°	2138.4	86.9
0°-90°	2461.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2461.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1401	1401	1401	1401	1401	
5°	1355	1379	1374	1384	1396	127
15°	1178	1210	1235	1288	1328	330
25°	949	985	1020	1075	1131	435
35°	693	730	759	827	896	431
45°	427	464	517	592	642	337
55°	288	294	316	358	377	257
65°	182	193	192	181	178	181
75°	99	108	95	88	84	105
85°	30	31	32	34	30	33
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1400.6	1400.6	1400.6	1400.6	1400.6
2.5°	1384.9	1404.2	1390.9	1392.1	1395.8
5°	1354.8	1378.9	1374.1	1383.7	1395.8
7.5°	1317.4	1343.9	1345.1	1368.0	1387.3
10°	1276.4	1304.1	1312.6	1347.5	1371.6
12.5°	1228.2	1258.3	1276.4	1319.8	1351.2
15°	1177.6	1210.1	1235.4	1288.5	1328.3
17.5°	1122.1	1157.1	1189.6	1246.3	1287.3
20°	1065.5	1102.9	1140.2	1193.3	1240.3
22.5°	1006.4	1045.0	1083.6	1135.4	1187.2
25°	948.6	984.7	1019.7	1075.1	1130.6
27.5°	885.9	923.3	953.4	1014.9	1072.7
30°	823.2	860.6	889.5	953.4	1013.7
32.5°	758.1	796.7	823.2	889.5	952.2
35°	693.1	730.4	759.3	826.8	895.5
37.5°	624.4	665.3	694.3	770.2	837.7
40°	559.3	597.8	632.8	712.3	776.2
42.5°	491.8	531.5	571.3	653.3	712.3
45°	426.7	464.0	517.1	591.8	642.4
47.5°	379.7	403.8	465.3	527.9	576.1
50°	348.3	358.0	414.6	470.1	509.8
52.5°	317.0	324.2	362.8	413.4	443.6
55°	288.1	294.1	315.8	358.0	377.3
57.5°	256.7	262.8	280.8	304.9	315.8
60°	231.4	236.2	250.7	254.3	251.9
62.5°	206.1	213.3	220.6	212.1	208.5
65°	182.0	192.9	191.6	180.8	178.4
67.5°	160.3	171.2	165.1	154.3	150.7
70°	138.6	149.5	141.0	130.2	126.6
72.5°	118.1	130.2	116.9	107.3	104.9
75°	98.8	108.5	95.2	88.0	84.4
77.5°	80.8	88.0	75.9	69.9	67.5
80°	62.7	67.5	57.9	54.2	53.0
82.5°	45.8	48.2	42.2	44.6	43.4
85°	30.1	31.3	32.5	33.7	30.1
87.5°	14.5	20.5	20.5	19.3	15.7
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	16.91	18.38	17.28	18.69	19.01	17.98	19.45	18.35	19.76	20.07
	3H	18.61	19.92	18.99	20.25	20.61	19.07	20.38	19.45	20.71	21.07
	4H	19.26	20.49	19.67	20.84	21.22	19.47	20.70	19.87	21.05	21.43
	6H	19.77	20.90	20.18	21.27	21.66	19.78	20.91	20.19	21.28	21.67
	8H	19.94	21.02	20.37	21.41	21.81	19.91	20.99	20.34	21.38	21.78
	12H	20.07	21.10	20.50	21.48	21.91	20.03	21.07	20.46	21.45	21.88
4H	2H	17.51	18.74	17.92	19.09	19.47	18.39	19.61	18.79	19.96	20.34
	3H	19.44	20.46	19.85	20.86	21.26	19.70	20.72	20.12	21.12	21.52
	4H	20.25	21.17	20.69	21.59	22.03	20.22	21.14	20.66	21.56	22.00
	6H	20.90	21.70	21.36	22.14	22.60	20.66	21.45	21.11	21.90	22.36
	8H	21.12	21.87	21.59	22.31	22.78	20.85	21.59	21.31	22.04	22.50
	12H	21.30	21.96	21.78	22.44	22.91	21.03	21.69	21.51	22.17	22.64
8H	4H	20.49	21.24	20.96	21.68	22.15	20.47	21.21	20.93	21.66	22.13
	6H	21.28	21.89	21.78	22.39	22.87	21.02	21.63	21.51	22.12	22.60
	8H	21.59	22.15	22.11	22.66	23.15	21.29	21.85	21.81	22.36	22.85
	12H	21.86	22.35	22.37	22.84	23.41	21.59	22.07	22.10	22.57	23.13
12H	4H	20.50	21.17	20.99	21.65	22.12	20.50	21.16	20.98	21.64	22.11
	6H	21.31	21.87	21.83	22.38	22.87	21.07	21.62	21.58	22.13	22.62
	8H	21.69	22.18	22.20	22.67	23.24	21.41	21.90	21.92	22.39	22.96