

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: P1059552

Luminaire Tested: S123RDR-H1165D935-X4F0-XX-UDD-WVL-W

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059552
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-H1165D935-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: 3500K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

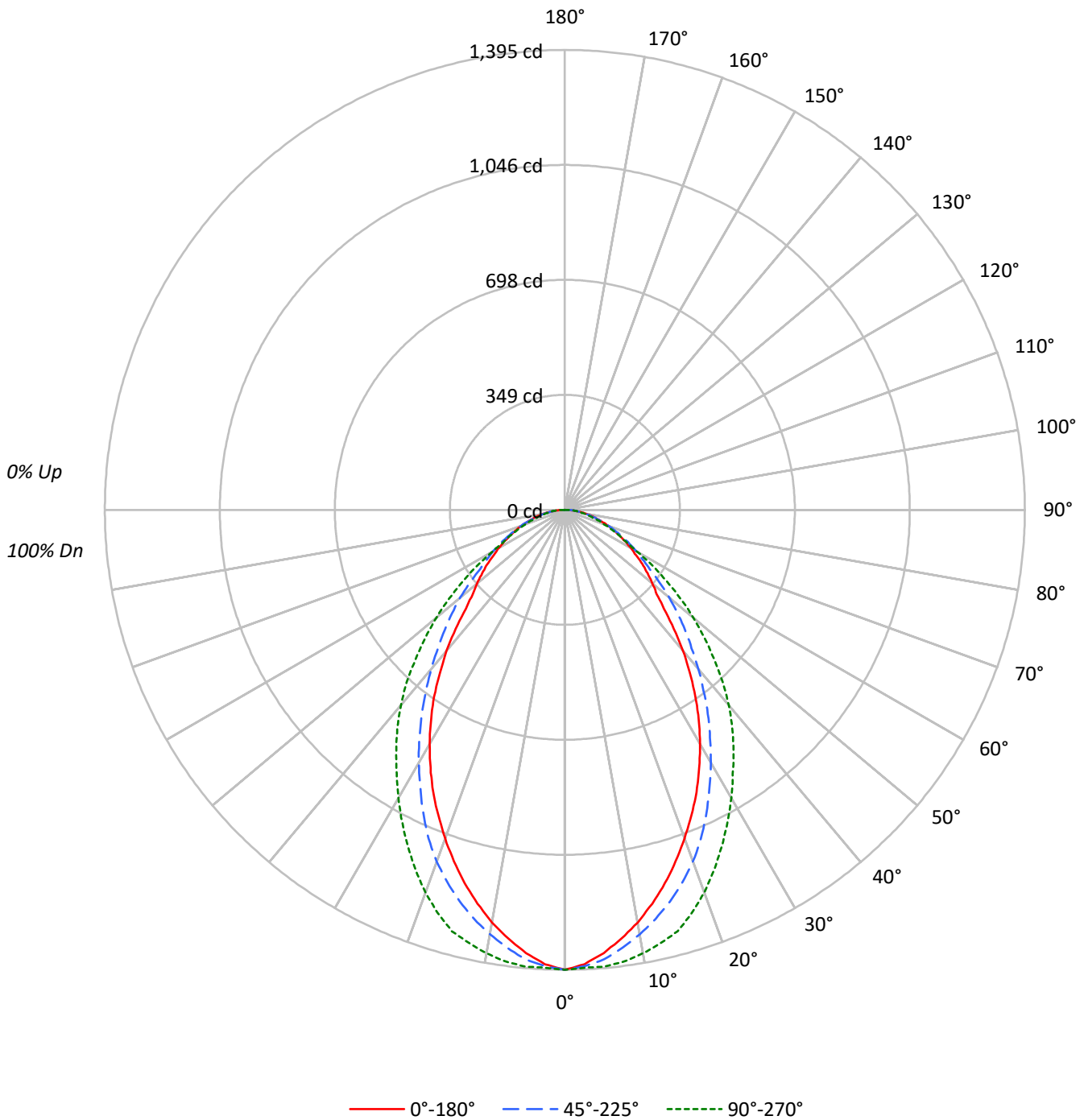
Lumens per Lamp: N/A
Luminaire Lumens: 2451.2 lumens
Efficiency: N/A
Efficacy: 67.2 lumens/watt
Spacing Criteria (0/90/45): 0.94 / 1.1 / 1.09
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 36.5
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	110	106	102	99	108	104	101	97	100	97	94	96	94	92	92	91	89	87				87
2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77	75				75
3	94	85	77	72	92	83	76	71	80	75	70	78	73	69	75	71	68	66				66
4	87	76	69	63	85	75	68	62	73	66	61	70	65	61	68	64	60	58				58
5	81	69	61	55	79	68	61	55	66	59	54	64	58	54	62	57	53	51				51
6	75	63	55	49	73	62	55	49	61	54	49	59	53	48	57	52	48	46				46
7	70	58	50	44	69	57	50	44	56	49	44	54	48	44	53	48	43	41				41
8	66	53	46	40	64	53	45	40	51	45	40	50	44	40	49	44	39	38				38
9	62	49	42	37	60	49	42	37	48	41	36	47	41	36	46	40	36	34				34
10	58	46	39	34	57	45	38	34	45	38	34	44	38	33	43	37	33	32				32

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	16380	16380	16380
5°	15905	16131	16386
10°	15158	15588	16289
15°	14259	14959	16082
20°	13261	14191	15436
25°	12241	13158	14589
30°	11117	12012	13689
35°	9895	10841	12785
40°	8538	9660	11851
45°	7058	8552	10625
50°	6337	7545	9276
55°	5874	6439	7691
60°	5413	5864	5892
65°	5037	5304	4937
70°	4741	4824	4326
75°	4464	4301	3811
80°	4220	3895	3570
85°	4042	4365	4042

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 10625 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	129.2	5.3
10°-20°	348.1	14.2
20°-30°	470.9	19.2
30°-40°	483.9	19.7
40°-50°	406.4	16.6
50°-60°	291.3	11.9
60°-70°	185.5	7.6
70°-80°	101.9	4.2
80°-90°	34.0	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°	948.1	38.7
0°-40°	1432.0	58.4
0°-60°	2129.8	86.9
0°-90°	2451.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2451.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1395	1395	1395	1395	1395	
5°	1349	1373	1368	1378	1390	126
15°	1173	1205	1230	1283	1323	329
25°	945	981	1016	1071	1126	433
35°	690	728	756	824	892	430
45°	425	462	515	589	640	336
55°	287	293	314	356	376	256
65°	181	192	191	180	178	181
75°	98	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°	1394.9	1394.9	1394.9	1394.9	1394.9
2.5°	1379.3	1398.5	1385.3	1386.5	1390.1
5°	1349.3	1373.3	1368.5	1378.1	1390.1
7.5°	1312.1	1338.5	1339.7	1362.5	1381.7
10°	1271.3	1298.9	1307.3	1342.1	1366.1
12.5°	1223.3	1253.3	1271.3	1314.5	1345.7
15°	1172.9	1205.3	1230.5	1283.3	1322.9
17.5°	1117.6	1152.4	1184.9	1241.3	1282.1
20°	1061.2	1098.4	1135.6	1188.5	1235.3
22.5°	1002.4	1040.8	1079.2	1130.8	1182.5
25°	944.8	980.8	1015.6	1070.8	1126.0
27.5°	882.3	919.6	949.6	1010.8	1068.4
30°	819.9	857.1	885.9	949.6	1009.6
32.5°	755.1	793.5	819.9	885.9	948.4
35°	690.3	727.5	756.3	823.5	891.9
37.5°	621.8	662.7	691.5	767.1	834.3
40°	557.0	595.4	630.2	709.5	773.1
42.5°	489.8	529.4	569.0	650.7	709.5
45°	425.0	462.2	515.0	589.4	639.8
47.5°	378.1	402.2	463.4	525.8	573.8
50°	346.9	356.5	413.0	468.2	507.8
52.5°	315.7	322.9	361.3	411.8	441.8
55°	286.9	292.9	314.5	356.5	375.7
57.5°	255.7	261.7	279.7	303.7	314.5
60°	230.5	235.3	249.7	253.3	250.9
62.5°	205.3	212.5	219.7	211.3	207.7
65°	181.3	192.1	190.9	180.1	177.7
67.5°	159.7	170.5	164.5	153.7	150.1
70°	138.1	148.9	140.5	129.7	126.0
72.5°	117.6	129.7	116.4	106.8	104.4
75°	98.4	108.0	94.8	87.6	84.0
77.5°	80.4	87.6	75.6	69.6	67.2
80°	62.4	67.2	57.6	54.0	52.8
82.5°	45.6	48.0	42.0	44.4	43.2
85°	30.0	31.2	32.4	33.6	30.0
87.5°	14.4	20.4	20.4	19.2	15.6
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	16.90	18.36	17.26	18.68	18.99	17.97	19.43	18.33	19.74	20.06
	3H	18.60	19.91	18.98	20.24	20.60	19.05	20.36	19.43	20.69	21.06
	4H	19.25	20.48	19.65	20.83	21.21	19.45	20.68	19.86	21.03	21.41
	6H	19.75	20.89	20.17	21.25	21.65	19.76	20.90	20.18	21.27	21.66
	8H	19.93	21.00	20.35	21.39	21.80	19.90	20.98	20.33	21.37	21.77
	12H	20.05	21.08	20.48	21.47	21.90	20.02	21.05	20.45	21.43	21.86
4H	2H	17.50	18.73	17.90	19.08	19.46	18.37	19.60	18.77	19.95	20.33
	3H	19.43	20.45	19.84	20.85	21.25	19.69	20.71	20.10	21.11	21.51
	4H	20.24	21.16	20.67	21.57	22.01	20.21	21.13	20.64	21.54	21.98
	6H	20.89	21.68	21.35	22.13	22.59	20.64	21.44	21.10	21.88	22.34
	8H	21.11	21.85	21.57	22.30	22.77	20.83	21.58	21.30	22.02	22.49
	12H	21.28	21.95	21.77	22.43	22.90	21.01	21.68	21.50	22.16	22.63
8H	4H	20.48	21.22	20.94	21.67	22.13	20.45	21.20	20.92	21.64	22.11
	6H	21.26	21.88	21.76	22.37	22.85	21.00	21.62	21.50	22.11	22.59
	8H	21.58	22.13	22.09	22.64	23.13	21.28	21.83	21.79	22.34	22.83
	12H	21.85	22.33	22.36	22.83	23.39	21.57	22.06	22.08	22.55	23.12
12H	4H	20.49	21.15	20.97	21.63	22.10	20.48	21.15	20.96	21.62	22.10
	6H	21.30	21.85	21.81	22.36	22.85	21.05	21.61	21.57	22.12	22.61
	8H	21.67	22.16	22.18	22.66	23.22	21.39	21.88	21.91	22.38	22.94