

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: P1059507

Luminaire Tested: S123RDR-H1165D835-X4F0-XX-UDD-WVL-W

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059507
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-H1165D835-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, 80 CRI LEDS
Ballast/Driver: -

Summary

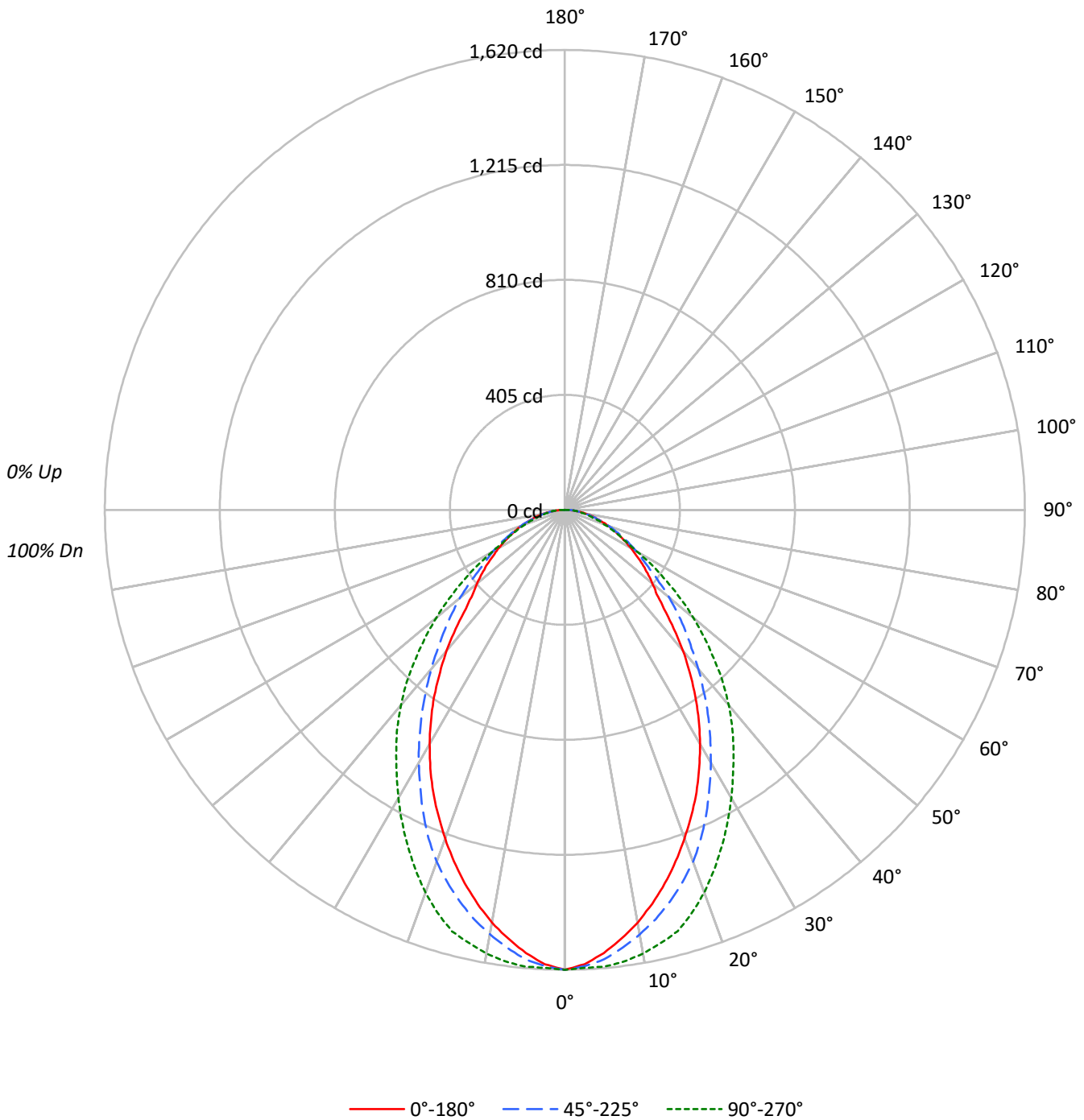
Lumens per Lamp: N/A
Luminaire Lumens: 2846.9 lumens
Efficiency: N/A
Efficacy: 78.0 lumens/watt
Spacing Criteria (0/90/45): 0.94 / 1.1 / 1.09
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

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°	19024	19024	19024
5°	18473	18736	19032
10°	17605	18105	18919
15°	16560	17373	18679
20°	15401	16482	17928
25°	14217	15283	16944
30°	12912	13952	15899
35°	11492	12592	14849
40°	9916	11221	13764
45°	8197	9932	12340
50°	7360	8761	10774
55°	6821	7479	8934
60°	6287	6811	6843
65°	5849	6160	5735
70°	5504	5600	5026
75°	5186	4995	4428
80°	4903	4524	4145
85°	4702	5066	4702

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 12340 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	150.1	5.3
10°-20°	404.3	14.2
20°-30°	546.9	19.2
30°-40°	562.0	19.7
40°-50°	472.0	16.6
50°-60°	338.4	11.9
60°-70°	215.5	7.6
70°-80°	118.4	4.2
80°-90°	39.5	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°	1101.2	38.7
0°-40°	1663.2	58.4
0°-60°	2473.6	86.9
0°-90°	2846.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2846.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1620	1620	1620	1620	1620	
5°	1567	1595	1590	1601	1615	147
15°	1362	1400	1429	1490	1536	382
25°	1097	1139	1180	1244	1308	503
35°	802	845	878	956	1036	499
45°	494	537	598	685	743	390
55°	333	340	365	414	436	298
65°	210	223	222	209	206	210
75°	114	126	110	102	98	122
85°	35	36	38	39	35	38
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1620.1	1620.1	1620.1	1620.1	1620.1
2.5°	1602.0	1624.3	1609.0	1610.4	1614.6
5°	1567.2	1595.0	1589.5	1600.6	1614.6
7.5°	1523.9	1554.6	1556.0	1582.5	1604.8
10°	1476.5	1508.6	1518.4	1558.8	1586.7
12.5°	1420.8	1455.6	1476.5	1526.7	1563.0
15°	1362.2	1399.9	1429.1	1490.5	1536.5
17.5°	1298.1	1338.5	1376.1	1441.7	1489.1
20°	1232.5	1275.8	1319.0	1380.3	1434.7
22.5°	1164.2	1208.8	1253.5	1313.4	1373.4
25°	1097.3	1139.1	1179.6	1243.7	1307.8
27.5°	1024.8	1068.0	1102.9	1174.0	1240.9
30°	952.3	995.5	1029.0	1102.9	1172.6
32.5°	877.0	921.6	952.3	1029.0	1101.5
35°	801.7	844.9	878.4	956.5	1035.9
37.5°	722.2	769.6	803.1	890.9	969.0
40°	646.9	691.6	732.0	824.0	897.9
42.5°	568.9	614.9	660.9	755.7	824.0
45°	493.6	536.8	598.1	684.6	743.1
47.5°	439.2	467.1	538.2	610.7	666.5
50°	402.9	414.1	479.6	543.8	589.8
52.5°	366.7	375.1	419.7	478.2	513.1
55°	333.2	340.2	365.3	414.1	436.4
57.5°	297.0	304.0	324.9	352.8	365.3
60°	267.7	273.3	290.0	294.2	291.4
62.5°	238.4	246.8	255.2	245.4	241.2
65°	210.5	223.1	221.7	209.1	206.4
67.5°	185.4	198.0	191.0	178.5	174.3
70°	160.3	172.9	163.1	150.6	146.4
72.5°	136.6	150.6	135.2	124.1	121.3
75°	114.3	125.5	110.1	101.8	97.6
77.5°	93.4	101.8	87.8	80.9	78.1
80°	72.5	78.1	66.9	62.7	61.3
82.5°	53.0	55.8	48.8	51.6	50.2
85°	34.9	36.3	37.6	39.0	34.9
87.5°	16.7	23.7	23.7	22.3	18.1
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	17.42	18.88	17.79	19.20	19.51	18.49	19.95	18.85	20.27	20.58
	3H	19.12	20.43	19.50	20.76	21.12	19.57	20.88	19.95	21.21	21.58
	4H	19.77	21.00	20.17	21.35	21.73	19.98	21.20	20.38	21.55	21.93
	6H	20.27	21.41	20.69	21.77	22.17	20.29	21.42	20.70	21.79	22.18
	8H	20.45	21.52	20.87	21.91	22.32	20.42	21.50	20.85	21.89	22.29
	12H	20.57	21.60	21.00	21.99	22.42	20.54	21.57	20.97	21.95	22.38
4H	2H	18.02	19.25	18.42	19.60	19.98	18.89	20.12	19.29	20.47	20.85
	3H	19.95	20.97	20.36	21.37	21.77	20.21	21.23	20.62	21.63	22.03
	4H	20.76	21.68	21.19	22.09	22.53	20.73	21.65	21.16	22.06	22.50
	6H	21.41	22.20	21.87	22.65	23.11	21.16	21.96	21.62	22.40	22.86
	8H	21.63	22.37	22.09	22.82	23.29	21.35	22.10	21.82	22.54	23.01
	12H	21.80	22.47	22.29	22.95	23.42	21.54	22.20	22.02	22.68	23.15
8H	4H	21.00	21.74	21.46	22.19	22.65	20.98	21.72	21.44	22.16	22.63
	6H	21.79	22.40	22.28	22.89	23.37	21.52	22.14	22.02	22.63	23.11
	8H	22.10	22.65	22.61	23.16	23.65	21.80	22.35	22.32	22.86	23.35
	12H	22.37	22.86	22.88	23.35	23.92	22.09	22.58	22.60	23.07	23.64
12H	4H	21.01	21.67	21.49	22.15	22.62	21.00	21.67	21.48	22.15	22.62
	6H	21.82	22.37	22.33	22.88	23.37	21.58	22.13	22.09	22.64	23.13
	8H	22.20	22.68	22.71	23.18	23.74	21.92	22.41	22.43	22.90	23.46