

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: P1059570

Luminaire Tested: S123RDR-H1165D950-X4F0-XX-UDD-WVL-W

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059570
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-H1165D950-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: 5000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

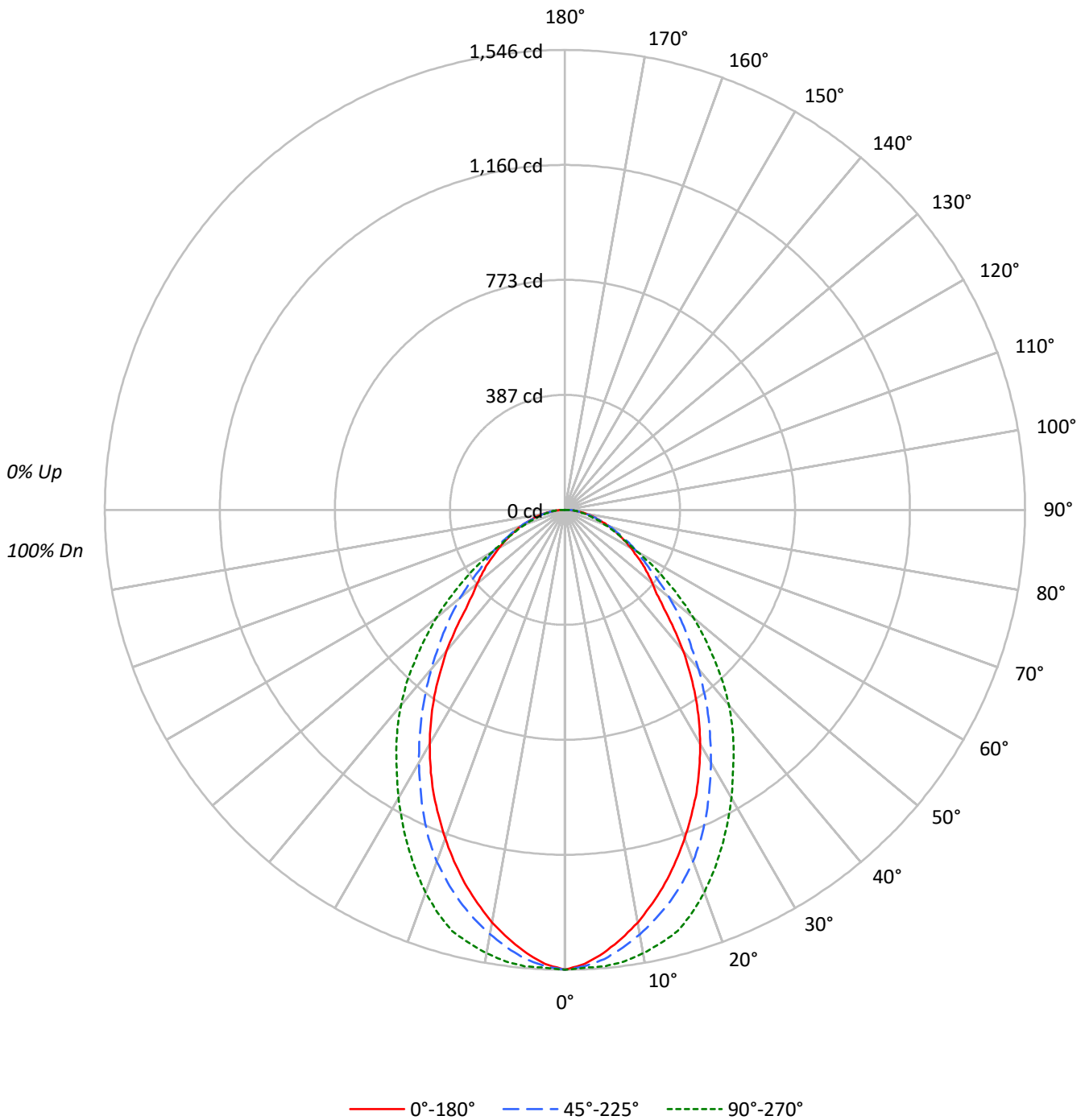
Lumens per Lamp: N/A
Luminaire Lumens: 2716.0 lumens
Efficiency: N/A
Efficacy: 74.4 lumens/watt
Spacing Criteria (0/90/45): 0.94 / 1.1 / 1.09
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

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				
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°	18149	18149	18149
5°	17623	17874	18156
10°	16796	17271	18049
15°	15798	16574	17819
20°	14693	15724	17103
25°	13563	14580	16166
30°	12318	13310	15167
35°	10963	12013	14167
40°	9461	10704	13131
45°	7820	9476	11774
50°	7022	8359	10278
55°	6508	7135	8523
60°	5998	6498	6529
65°	5582	5877	5471
70°	5253	5342	4796
75°	4950	4768	4224
80°	4679	4314	3956
85°	4486	4837	4486

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 11774 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	143.2	5.3
10°-20°	385.7	14.2
20°-30°	521.7	19.2
30°-40°	536.1	19.7
40°-50°	450.3	16.6
50°-60°	322.8	11.9
60°-70°	205.5	7.6
70°-80°	112.9	4.2
80°-90°	37.7	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°	1050.6	38.7
0°-40°	1586.7	58.4
0°-60°	2359.8	86.9
0°-90°	2716.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2716.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1546	1546	1546	1546	1546	
5°	1495	1522	1516	1527	1540	140
15°	1300	1336	1363	1422	1466	364
25°	1047	1087	1125	1186	1248	480
35°	765	806	838	912	988	476
45°	471	512	571	653	709	372
55°	318	325	348	395	416	284
65°	201	213	212	200	197	200
75°	109	120	105	97	93	116
85°	33	35	36	37	33	37
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1545.6	1545.6	1545.6	1545.6	1545.6
2.5°	1528.3	1549.6	1535.0	1536.3	1540.3
5°	1495.1	1521.7	1516.4	1527.0	1540.3
7.5°	1453.8	1483.1	1484.4	1509.7	1531.0
10°	1408.6	1439.2	1448.5	1487.1	1513.7
12.5°	1355.4	1388.7	1408.6	1456.5	1491.1
15°	1299.5	1335.5	1363.4	1421.9	1465.8
17.5°	1238.4	1276.9	1312.8	1375.4	1420.6
20°	1175.8	1217.1	1258.3	1316.8	1368.7
22.5°	1110.7	1153.2	1195.8	1253.0	1310.2
25°	1046.8	1086.7	1125.3	1186.5	1247.7
27.5°	977.7	1018.9	1052.1	1120.0	1183.8
30°	908.5	949.7	981.6	1052.1	1118.6
32.5°	836.7	879.2	908.5	981.6	1050.8
35°	764.8	806.1	838.0	912.5	988.3
37.5°	689.0	734.2	766.2	850.0	924.4
40°	617.2	659.7	698.3	786.1	856.6
42.5°	542.7	586.6	630.5	720.9	786.1
45°	470.9	512.1	570.6	653.1	709.0
47.5°	419.0	445.6	513.4	582.6	635.8
50°	384.4	395.1	457.6	518.8	562.6
52.5°	349.8	357.8	400.4	456.2	489.5
55°	317.9	324.6	348.5	395.1	416.3
57.5°	283.3	290.0	309.9	336.5	348.5
60°	255.4	260.7	276.7	280.7	278.0
62.5°	227.5	235.4	243.4	234.1	230.1
65°	200.9	212.8	211.5	199.5	196.9
67.5°	176.9	188.9	182.2	170.3	166.3
70°	153.0	164.9	155.6	143.7	139.7
72.5°	130.4	143.7	129.0	118.4	115.7
75°	109.1	119.7	105.1	97.1	93.1
77.5°	89.1	97.1	83.8	77.1	74.5
80°	69.2	74.5	63.8	59.9	58.5
82.5°	50.5	53.2	46.6	49.2	47.9
85°	33.3	34.6	35.9	37.2	33.3
87.5°	16.0	22.6	22.6	21.3	17.3
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	17.26	18.72	17.62	19.03	19.35	18.32	19.79	18.69	20.10	20.42
	3H	18.95	20.26	19.33	20.59	20.95	19.41	20.72	19.79	21.05	21.41
	4H	19.61	20.84	20.01	21.18	21.56	19.81	21.04	20.21	21.39	21.77
	6H	20.11	21.24	20.52	21.61	22.00	20.12	21.25	20.53	21.62	22.01
	8H	20.28	21.36	20.71	21.75	22.15	20.26	21.33	20.68	21.72	22.13
	12H	20.41	21.44	20.84	21.82	22.25	20.38	21.41	20.81	21.79	22.22
4H	2H	17.86	19.09	18.26	19.43	19.81	18.73	19.96	19.13	20.31	20.69
	3H	19.78	20.80	20.20	21.20	21.61	20.05	21.06	20.46	21.47	21.87
	4H	20.60	21.51	21.03	21.93	22.37	20.57	21.48	21.00	21.90	22.34
	6H	21.24	22.04	21.70	22.48	22.95	21.00	21.79	21.46	22.24	22.70
	8H	21.47	22.21	21.93	22.66	23.12	21.19	21.93	21.65	22.38	22.85
	12H	21.64	22.30	22.12	22.78	23.25	21.37	22.04	21.85	22.52	22.99
8H	4H	20.83	21.58	21.30	22.02	22.49	20.81	21.56	21.28	22.00	22.47
	6H	21.62	22.24	22.12	22.73	23.21	21.36	21.97	21.86	22.47	22.95
	8H	21.93	22.49	22.45	23.00	23.49	21.64	22.19	22.15	22.70	23.19
	12H	22.20	22.69	22.71	23.19	23.75	21.93	22.42	22.44	22.91	23.48
12H	4H	20.85	21.51	21.33	21.99	22.46	20.84	21.50	21.32	21.98	22.45
	6H	21.66	22.21	22.17	22.72	23.21	21.41	21.97	21.93	22.48	22.97
	8H	22.03	22.52	22.54	23.01	23.58	21.75	22.24	22.26	22.73	23.30