

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2024 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1060221

Luminaire Tested: S124RDRP-S1020D830-X4F0-XX-UDD-BVL-W

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2024
Report Number: P1060221
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-75)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124RDRP-S1020D830-X4F0-XX-UDD-BVL-W
Description: DEFINE 4 WHITE REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE
LOUVER WITH DIFFUSER
CORE LIGHT ENGINE
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

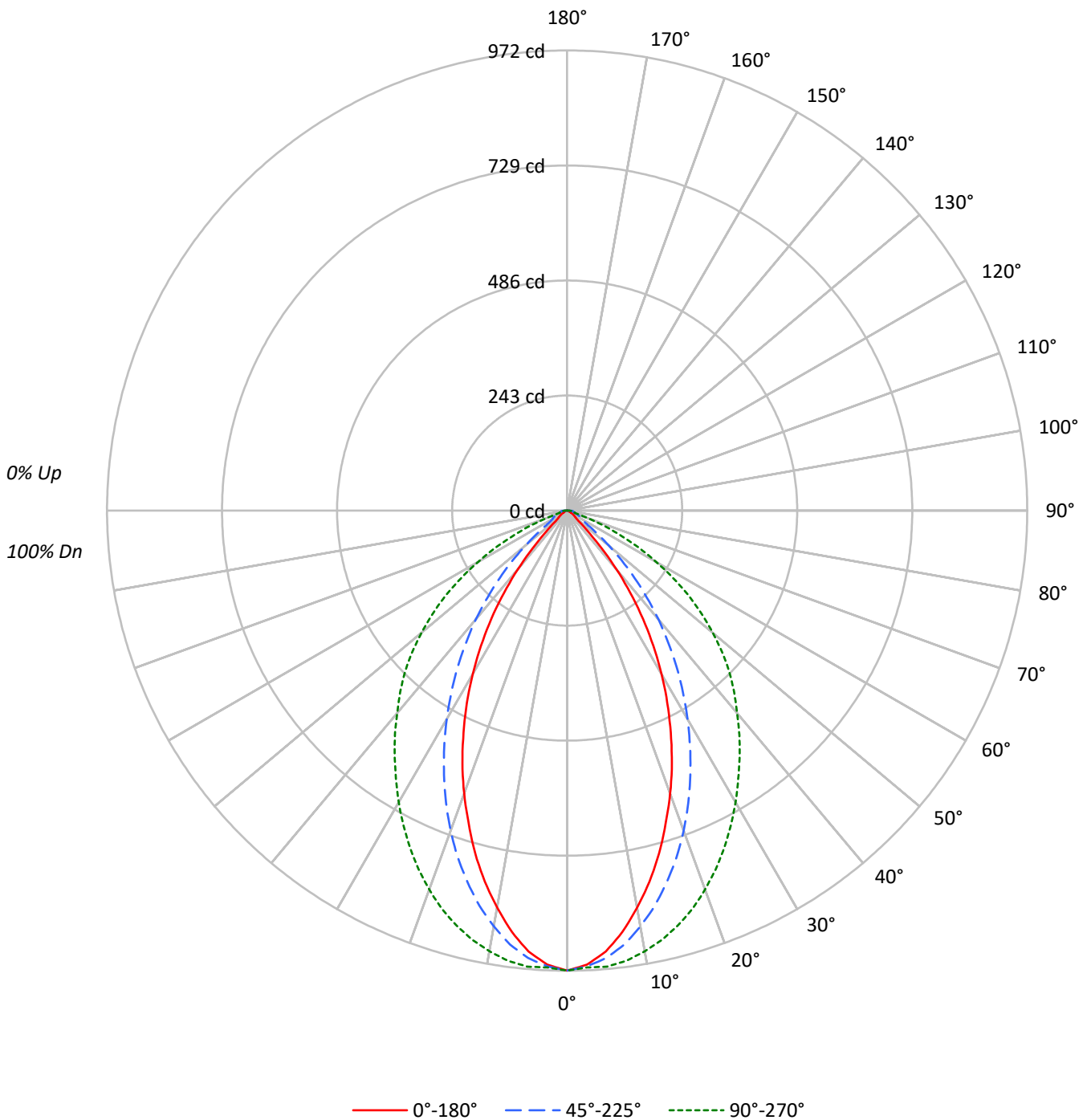
Lumens per Lamp: N/A
Luminaire Lumens: 1224.4 lumens
Efficiency: N/A
Efficacy: 35.0 lumens/watt
Spacing Criteria (0/90/45): 0.79 / 1.11 / 0.97
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 35
Input Voltage (V): 120
Input Current (A_{in}): 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	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	112	108	105	102	109	106	103	101	102	100	98	98	96	95	95	93	92	90					90			
2	105	98	93	89	102	97	92	88	93	89	86	90	87	84	87	85	82	81					81			
3	98	90	84	79	96	88	83	78	86	81	77	83	79	75	81	77	74	72					72			
4	91	82	75	70	89	81	75	70	79	73	69	76	72	68	74	70	67	65					65			
5	86	75	68	63	84	74	68	63	72	67	62	71	66	62	69	65	61	59					59			
6	80	70	62	57	79	69	62	57	67	61	56	66	60	56	64	59	56	54					54			
7	75	64	57	52	74	64	57	52	62	56	52	61	55	51	60	55	51	49					49			
8	71	60	53	48	70	59	52	48	58	52	48	57	51	47	56	51	47	45					45			
9	67	56	49	44	66	55	49	44	54	48	44	53	48	44	52	47	44	42					42			
10	63	52	45	41	62	52	45	41	51	45	41	50	44	41	49	44	40	39					39			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8366	8366	8366
5°	8082	8201	8358
10°	7447	7797	8265
15°	6689	7248	8081
20°	5830	6593	7805
25°	4919	5850	7464
30°	3968	5056	7075
35°	2937	4231	6676
40°	1820	3371	6280
45°	722	2458	5915
50°	320	1543	5377
55°	257	805	4708
60°	177	608	3751
65°	116	603	2580
70°	116	546	1206
75°	153	532	532
80°	228	620	620
85°	454	1235	899

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 5915 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	89.1	7.3
10°-20°	230.0	18.8
20°-30°	290.3	23.7
30°-40°	266.3	21.8
40°-50°	181.4	14.8
50°-60°	98.8	8.1
60°-70°	42.8	3.5
70°-80°	15.6	1.3
80°-90°	10.0	0.8
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°	609.4	49.8
0°-40°	875.8	71.5
0°-60°	1156.0	94.4
0°-90°	1224.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1224.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	972	972	972	972	972	
5°	935	948	949	959	967	87
15°	750	776	813	871	906	209
25°	518	554	616	714	786	237
35°	279	320	402	530	635	173
45°	59	99	202	358	486	55
55°	17	18	54	197	314	15
65°	6	8	30	62	127	7
75°	5	15	16	16	16	5
85°	5	10	12	12	9	4
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	971.5	971.5	971.5	971.5	971.5
2.5°	960.1	971.5	963.5	965.8	965.8
5°	935.0	947.5	948.7	958.9	966.9
7.5°	897.4	915.6	924.7	945.2	958.9
10°	851.7	873.4	891.7	927.0	945.2
12.5°	802.7	827.8	855.2	901.9	928.1
15°	750.3	776.5	813.0	871.1	906.5
17.5°	692.1	724.0	768.5	838.1	881.4
20°	636.2	668.2	719.5	798.2	851.7
22.5°	578.1	611.2	668.2	756.0	819.8
25°	517.7	554.2	615.7	713.8	785.6
27.5°	458.4	497.1	562.1	669.3	749.1
30°	399.1	437.8	508.5	623.7	711.5
32.5°	338.6	378.6	455.0	575.8	672.7
35°	279.4	320.4	402.5	530.2	635.1
37.5°	218.9	262.3	350.0	485.7	597.5
40°	161.9	205.2	299.9	441.3	558.7
42.5°	108.3	151.7	248.6	397.9	522.2
45°	59.3	99.2	201.8	358.0	485.7
47.5°	31.9	54.7	156.2	319.3	444.7
50°	23.9	29.6	115.2	278.2	401.4
52.5°	20.5	22.8	79.8	234.9	358.0
55°	17.1	18.2	53.6	197.3	313.6
57.5°	13.7	14.8	39.9	159.6	265.7
60°	10.3	12.5	35.3	123.1	217.8
62.5°	8.0	10.3	33.1	90.1	172.2
65°	5.7	8.0	29.6	61.6	126.6
67.5°	5.7	9.1	25.1	39.9	85.5
70°	4.6	12.5	21.7	26.2	47.9
72.5°	4.6	13.7	18.2	18.2	18.2
75°	4.6	14.8	16.0	16.0	16.0
77.5°	4.6	13.7	14.8	13.7	13.7
80°	4.6	12.5	12.5	12.5	12.5
82.5°	4.6	11.4	12.5	12.5	10.3
85°	4.6	10.3	12.5	12.5	9.1
87.5°	3.4	10.3	11.4	11.4	6.8
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	0.00	0.00	0.00	0.00	0.31	15.79	17.07	16.15	17.38	17.69
	3H	0.00	0.97	0.22	1.30	1.66	16.16	17.29	16.54	17.63	17.99
	4H	1.06	2.12	1.47	2.47	2.85	16.14	17.19	16.55	17.55	17.93
	6H	2.25	3.22	2.67	3.59	3.99	16.13	17.10	16.55	17.47	17.86
	8H	2.85	3.76	3.28	4.16	4.56	16.13	17.04	16.56	17.44	17.84
	12H	3.53	4.40	3.96	4.78	5.21	16.14	17.02	16.58	17.40	17.83
4H	2H	2.02	3.08	2.43	3.43	3.81	15.60	16.65	16.00	17.00	17.39
	3H	3.61	4.47	4.02	4.87	5.28	16.02	16.88	16.43	17.28	17.68
	4H	4.91	5.67	5.34	6.09	6.54	16.02	16.78	16.45	17.20	17.65
	6H	6.04	6.70	6.50	7.15	7.62	16.06	16.72	16.52	17.17	17.63
	8H	6.55	7.17	7.02	7.62	8.09	16.08	16.70	16.55	17.15	17.62
	12H	7.11	7.65	7.59	8.14	8.61	16.15	16.69	16.64	17.18	17.65
8H	4H	5.99	6.61	6.46	7.06	7.53	15.93	16.54	16.40	16.99	17.46
	6H	7.53	8.04	8.04	8.54	9.02	16.00	16.51	16.51	17.01	17.49
	8H	8.35	8.80	8.87	9.32	9.81	16.09	16.54	16.61	17.06	17.55
	12H	9.18	9.59	9.70	10.08	10.65	16.26	16.66	16.77	17.15	17.73
12H	4H	6.18	6.73	6.67	7.21	7.68	15.89	16.44	16.38	16.92	17.39
	6H	7.89	8.34	8.41	8.86	9.35	15.98	16.43	16.50	16.95	17.44
	8H	8.90	9.30	9.42	9.80	10.37	16.11	16.52	16.63	17.01	17.58