

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: P1060245

Luminaire Tested: S124RDRP-S1020D840-X4F0-XX-UDD-WVL-W

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1060245  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-73)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124RDRP-S1020D840-X4F0-XX-UDD-WVL-W  
Description: DEFINE 4 WHITE REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE  
LOUVER WITH DIFFUSER  
CORE LIGHT ENGINE  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: -

**Summary**

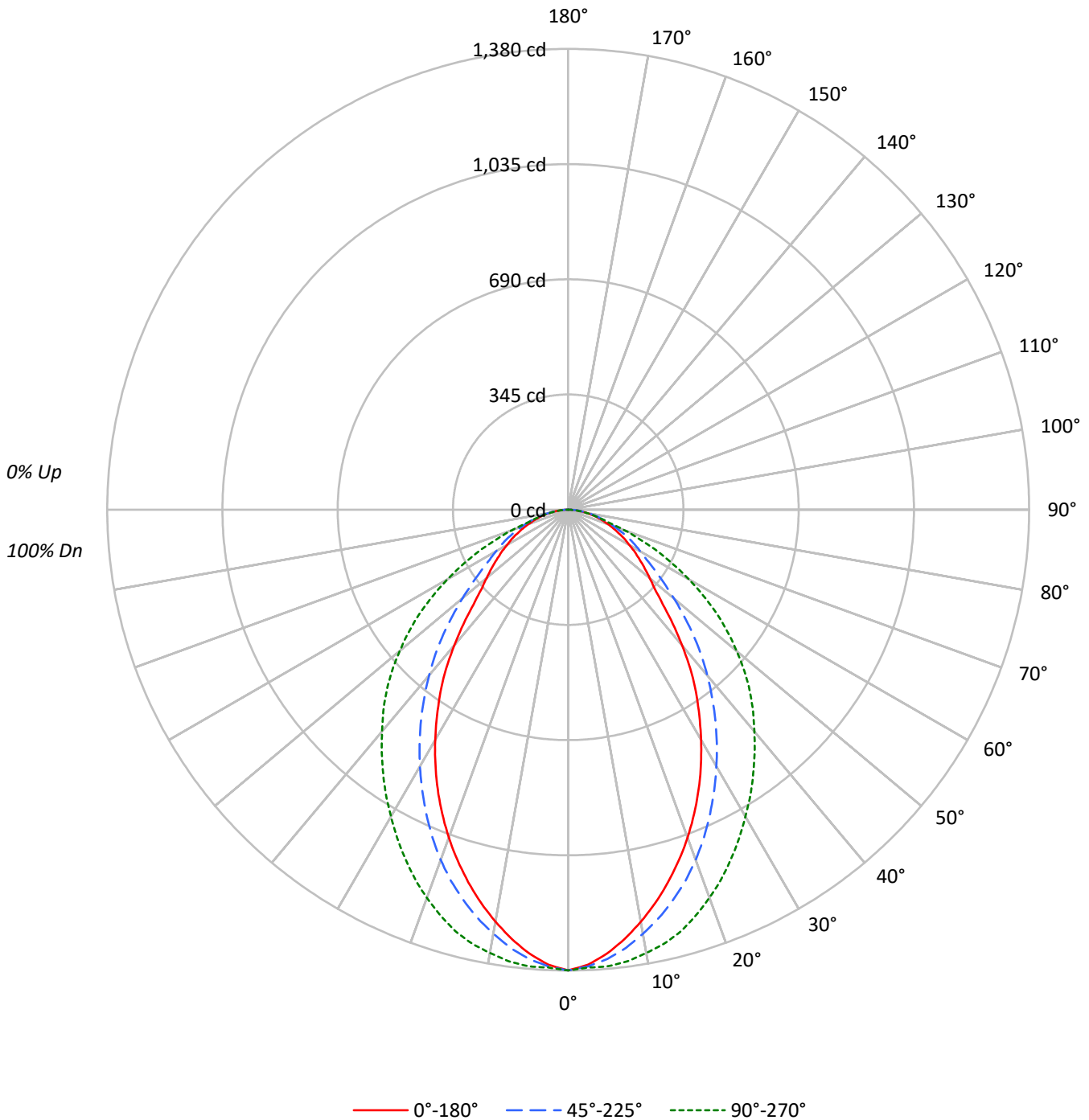
Lumens per Lamp: N/A  
Luminaire Lumens: 2531.6 lumens  
Efficiency: N/A  
Efficacy: 72.3 lumens/watt  
Spacing Criteria (0/90/45): 0.93 / 1.15 / 1.11  
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 35  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): 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	110	106	102	99	108	104	100	97	100	97	94	96	93	91	92	90	89					87				
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	80	77					75				
3	94	84	77	71	91	83	76	70	80	74	69	77	72	68	75	70	67					65				
4	86	76	68	62	84	74	67	61	72	66	60	70	64	60	68	63	59					57				
5	80	68	60	54	78	67	60	54	65	59	53	63	58	53	62	56	52					50				
6	75	62	54	48	73	61	54	48	60	53	48	58	52	47	57	51	47					45				
7	70	57	49	43	68	56	49	43	55	48	43	53	47	43	52	47	42					40				
8	65	53	45	39	64	52	44	39	51	44	39	49	43	39	48	43	38					37				
9	61	49	41	36	60	48	41	36	47	40	35	46	40	35	45	39	35					33				
10	58	45	38	33	56	45	38	33	44	37	33	43	37	32	42	36	32					31				

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	11880	11880	11880
5°	11535	11672	11862
10°	10954	11274	11786
15°	10297	10797	11646
20°	9577	10226	11334
25°	8781	9547	10963
30°	7915	8826	10550
35°	7007	8073	10152
40°	5957	7288	9744
45°	4877	6438	9367
50°	4269	5529	8816
55°	3923	4765	8157
60°	3637	4290	7192
65°	3409	4030	6021
70°	3198	3688	4519
75°	3004	3370	3290
80°	2787	3089	2787
85°	2529	3013	2411

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 9367 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	127.5	5.0
10°-20°	343.1	13.6
20°-30°	468.9	18.5
30°-40°	492.8	19.5
40°-50°	427.7	16.9
50°-60°	322.6	12.7
60°-70°	209.1	8.3
70°-80°	107.3	4.2
80°-90°	32.5	1.3
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°	939.5	37.1
0°-40°	1432.3	56.6
0°-60°	2182.6	86.2
0°-90°	2531.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2531.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1380	1380	1380	1380	1380	
5°	1334	1353	1350	1361	1372	125
15°	1155	1183	1211	1266	1306	324
25°	924	957	1005	1082	1154	424
35°	667	703	768	870	966	415
45°	400	438	529	660	769	315
55°	261	269	317	450	543	235
65°	167	171	198	239	296	167
75°	90	101	101	103	99	96
85°	26	32	30	29	24	29
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1379.6	1379.6	1379.6	1379.6	1379.6
2.5°	1363.8	1380.9	1368.6	1371.1	1372.3
5°	1334.5	1352.8	1350.3	1361.3	1372.3
7.5°	1296.6	1318.6	1323.5	1345.4	1363.8
10°	1252.7	1277.1	1289.3	1324.7	1347.9
12.5°	1206.3	1230.7	1252.7	1297.8	1330.8
15°	1155.0	1183.1	1211.1	1266.1	1306.4
17.5°	1101.3	1130.6	1166.0	1225.8	1273.4
20°	1045.1	1074.4	1115.9	1180.6	1236.8
22.5°	985.3	1018.2	1062.2	1131.8	1197.7
25°	924.2	957.2	1004.8	1081.7	1153.8
27.5°	860.7	894.9	946.2	1031.7	1108.6
30°	796.0	832.7	887.6	978.0	1061.0
32.5°	730.1	769.2	827.8	924.2	1014.6
35°	666.6	703.2	768.0	870.5	965.7
37.5°	600.7	637.3	706.9	818.0	916.9
40°	529.9	570.2	648.3	763.1	866.8
42.5°	463.9	504.2	588.5	710.6	819.2
45°	400.5	438.3	528.7	660.5	769.2
47.5°	351.6	378.5	468.8	611.7	715.5
50°	318.7	330.9	412.7	558.0	658.1
52.5°	289.4	299.1	361.4	504.2	601.9
55°	261.3	268.6	317.4	450.5	543.3
57.5°	236.9	240.5	278.4	396.8	479.8
60°	211.2	216.1	249.1	341.9	417.6
62.5°	190.5	192.9	223.4	289.4	355.3
65°	167.3	170.9	197.8	239.3	295.5
67.5°	146.5	152.6	170.9	195.3	233.2
70°	127.0	135.5	146.5	158.7	179.5
72.5°	108.7	118.4	124.5	129.4	125.8
75°	90.3	101.3	101.3	102.6	98.9
77.5°	73.3	83.0	81.8	80.6	75.7
80°	56.2	64.7	62.3	61.0	56.2
82.5°	41.5	47.6	45.2	44.0	37.8
85°	25.6	31.7	30.5	29.3	24.4
87.5°	12.2	18.3	17.1	15.9	11.0
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	15.10	16.59	15.47	16.90	17.22	18.84	20.33	19.20	20.64	20.95
	3H	16.77	18.10	17.15	18.43	18.79	19.97	21.30	20.34	21.63	21.99
	4H	17.43	18.68	17.84	19.03	19.41	20.26	21.51	20.66	21.86	22.24
	6H	17.94	19.10	18.36	19.46	19.86	20.46	21.61	20.87	21.98	22.37
	8H	18.12	19.22	18.55	19.61	20.01	20.52	21.61	20.94	22.00	22.40
	12H	18.24	19.29	18.67	19.67	20.10	20.55	21.60	20.98	21.98	22.41
4H	2H	15.89	17.14	16.29	17.49	17.87	19.01	20.25	19.41	20.60	20.98
	3H	17.76	18.80	18.18	19.20	19.60	20.34	21.37	20.75	21.77	22.17
	4H	18.57	19.50	19.00	19.92	20.36	20.75	21.68	21.19	22.10	22.54
	6H	19.21	20.02	19.67	20.47	20.93	21.07	21.88	21.53	22.33	22.79
	8H	19.44	20.19	19.90	20.64	21.10	21.17	21.93	21.63	22.37	22.84
	12H	19.60	20.28	20.08	20.75	21.23	21.24	21.92	21.72	22.39	22.87
8H	4H	18.92	19.67	19.38	20.12	20.59	20.89	21.64	21.35	22.09	22.55
	6H	19.71	20.33	20.20	20.82	21.30	21.30	21.93	21.80	22.42	22.90
	8H	20.03	20.59	20.54	21.10	21.59	21.46	22.02	21.98	22.53	23.02
	12H	20.29	20.78	20.80	21.28	21.84	21.60	22.10	22.11	22.59	23.16
12H	4H	18.95	19.62	19.43	20.10	20.57	20.89	21.57	21.37	22.04	22.52
	6H	19.77	20.33	20.28	20.84	21.33	21.33	21.89	21.84	22.40	22.89
	8H	20.15	20.65	20.66	21.14	21.71	21.54	22.03	22.05	22.52	23.09