

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: P1060632

Luminaire Tested: S124RDR-H1020D830-X4F0-XX-UDD-WVL-W

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1060632
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: S124RDR-H1020D830-X4F0-XX-UDD-WVL-W
Description: DEFINE 4 WHITE REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE
LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

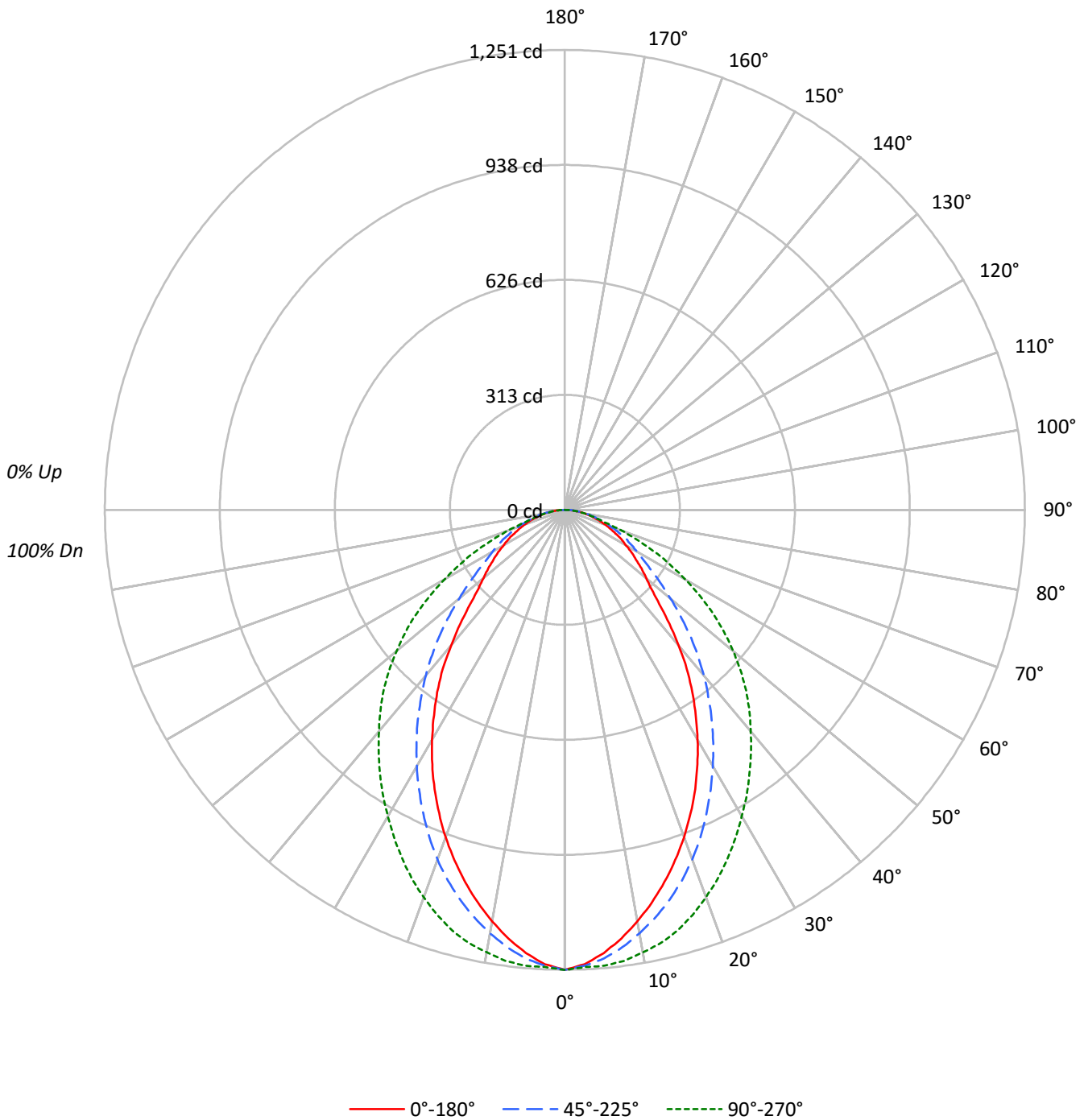
Lumens per Lamp: N/A
Luminaire Lumens: 2296.2 lumens
Efficiency: N/A
Efficacy: 73.6 lumens/watt
Spacing Criteria (0/90/45): 0.93 / 1.15 / 1.11
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 31.2
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	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°	10776	10776	10776
5°	10463	10587	10759
10°	9935	10225	10690
15°	9339	9793	10563
20°	8686	9276	10280
25°	7965	8660	9943
30°	7179	8005	9568
35°	6356	7323	9209
40°	5402	6610	8839
45°	4423	5839	8497
50°	3872	5014	7996
55°	3558	4322	7398
60°	3300	3891	6522
65°	3091	3655	5461
70°	2900	3346	4099
75°	2725	3058	2984
80°	2524	2802	2524
85°	2302	2737	2184

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 8497 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	115.6	5.0
10°-20°	311.2	13.6
20°-30°	425.3	18.5
30°-40°	447.0	19.5
40°-50°	387.9	16.9
50°-60°	292.6	12.7
60°-70°	189.7	8.3
70°-80°	97.4	4.2
80°-90°	29.5	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°	852.1	37.1
0°-40°	1299.1	56.6
0°-60°	1979.7	86.2
0°-90°	2296.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2296.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1251	1251	1251	1251	1251	
5°	1210	1227	1225	1235	1245	113
15°	1048	1073	1098	1148	1185	294
25°	838	868	911	981	1046	384
35°	605	638	697	790	876	376
45°	363	398	480	599	698	286
55°	237	244	288	409	493	213
65°	152	155	179	217	268	151
75°	82	92	92	93	90	87
85°	23	29	28	27	22	27
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1251.4	1251.4	1251.4	1251.4	1251.4
2.5°	1237.0	1252.5	1241.4	1243.6	1244.7
5°	1210.4	1227.0	1224.8	1234.8	1244.7
7.5°	1176.1	1196.0	1200.4	1220.4	1237.0
10°	1136.2	1158.3	1169.4	1201.5	1222.6
12.5°	1094.1	1116.3	1136.2	1177.2	1207.1
15°	1047.6	1073.1	1098.5	1148.4	1184.9
17.5°	998.9	1025.5	1057.6	1111.8	1155.0
20°	947.9	974.5	1012.2	1070.9	1121.8
22.5°	893.7	923.6	963.4	1026.6	1086.4
25°	838.3	868.2	911.4	981.2	1046.5
27.5°	780.7	811.7	858.2	935.8	1005.5
30°	722.0	755.2	805.1	887.0	962.3
32.5°	662.2	697.7	750.8	838.3	920.3
35°	604.6	637.9	696.6	789.6	876.0
37.5°	544.8	578.1	641.2	742.0	831.7
40°	480.6	517.2	588.0	692.1	786.3
42.5°	420.8	457.4	533.8	644.5	743.1
45°	363.2	397.6	479.5	599.1	697.7
47.5°	318.9	343.3	425.2	554.8	648.9
50°	289.0	300.1	374.3	506.1	596.9
52.5°	262.5	271.3	327.8	457.4	545.9
55°	237.0	243.6	287.9	408.6	492.8
57.5°	214.8	218.2	252.5	359.9	435.2
60°	191.6	196.0	225.9	310.1	378.7
62.5°	172.8	175.0	202.7	262.5	322.3
65°	151.7	155.0	179.4	217.1	268.0
67.5°	132.9	138.4	155.0	177.2	211.5
70°	115.2	122.9	132.9	144.0	162.8
72.5°	98.6	107.4	113.0	117.4	114.1
75°	81.9	91.9	91.9	93.0	89.7
77.5°	66.4	75.3	74.2	73.1	68.7
80°	50.9	58.7	56.5	55.4	50.9
82.5°	37.7	43.2	41.0	39.9	34.3
85°	23.3	28.8	27.7	26.6	22.1
87.5°	11.1	16.6	15.5	14.4	10.0
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	14.76	16.25	15.13	16.56	16.88	18.50	19.99	18.87	20.30	20.61
	3H	16.43	17.76	16.81	18.09	18.45	19.63	20.96	20.00	21.29	21.65
	4H	17.10	18.35	17.50	18.69	19.07	19.92	21.17	20.32	21.52	21.90
	6H	17.60	18.76	18.02	19.12	19.52	20.12	21.28	20.54	21.64	22.03
	8H	17.78	18.88	18.21	19.27	19.67	20.18	21.27	20.60	21.66	22.07
	12H	17.90	18.95	18.33	19.33	19.76	20.21	21.26	20.64	21.64	22.07
4H	2H	15.56	16.80	15.96	17.15	17.53	18.67	19.91	19.07	20.26	20.64
	3H	17.43	18.46	17.84	18.86	19.26	20.00	21.03	20.41	21.43	21.83
	4H	18.23	19.16	18.66	19.58	20.02	20.41	21.35	20.85	21.76	22.20
	6H	18.87	19.68	19.33	20.13	20.59	20.73	21.54	21.19	21.99	22.45
	8H	19.10	19.85	19.56	20.30	20.77	20.83	21.59	21.29	22.03	22.50
	12H	19.26	19.94	19.75	20.42	20.89	20.90	21.58	21.38	22.06	22.53
8H	4H	18.58	19.34	19.04	19.78	20.25	20.55	21.30	21.01	21.75	22.22
	6H	19.37	19.99	19.87	20.49	20.96	20.97	21.59	21.46	22.08	22.56
	8H	19.69	20.25	20.20	20.76	21.25	21.12	21.68	21.64	22.19	22.68
	12H	19.95	20.45	20.46	20.94	21.51	21.26	21.76	21.77	22.25	22.82
12H	4H	18.61	19.28	19.09	19.76	20.23	20.55	21.23	21.03	21.71	22.18
	6H	19.43	19.99	19.94	20.50	20.99	20.99	21.55	21.50	22.06	22.55
	8H	19.82	20.31	20.33	20.80	21.37	21.20	21.69	21.71	22.19	22.75