

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: P243221

Luminaire Tested: S122RDRP-H865D830-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P243221
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-63)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122RDRP-H865D830-X4F0-XX-UDD-F-W
Description: DEFINE 2 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

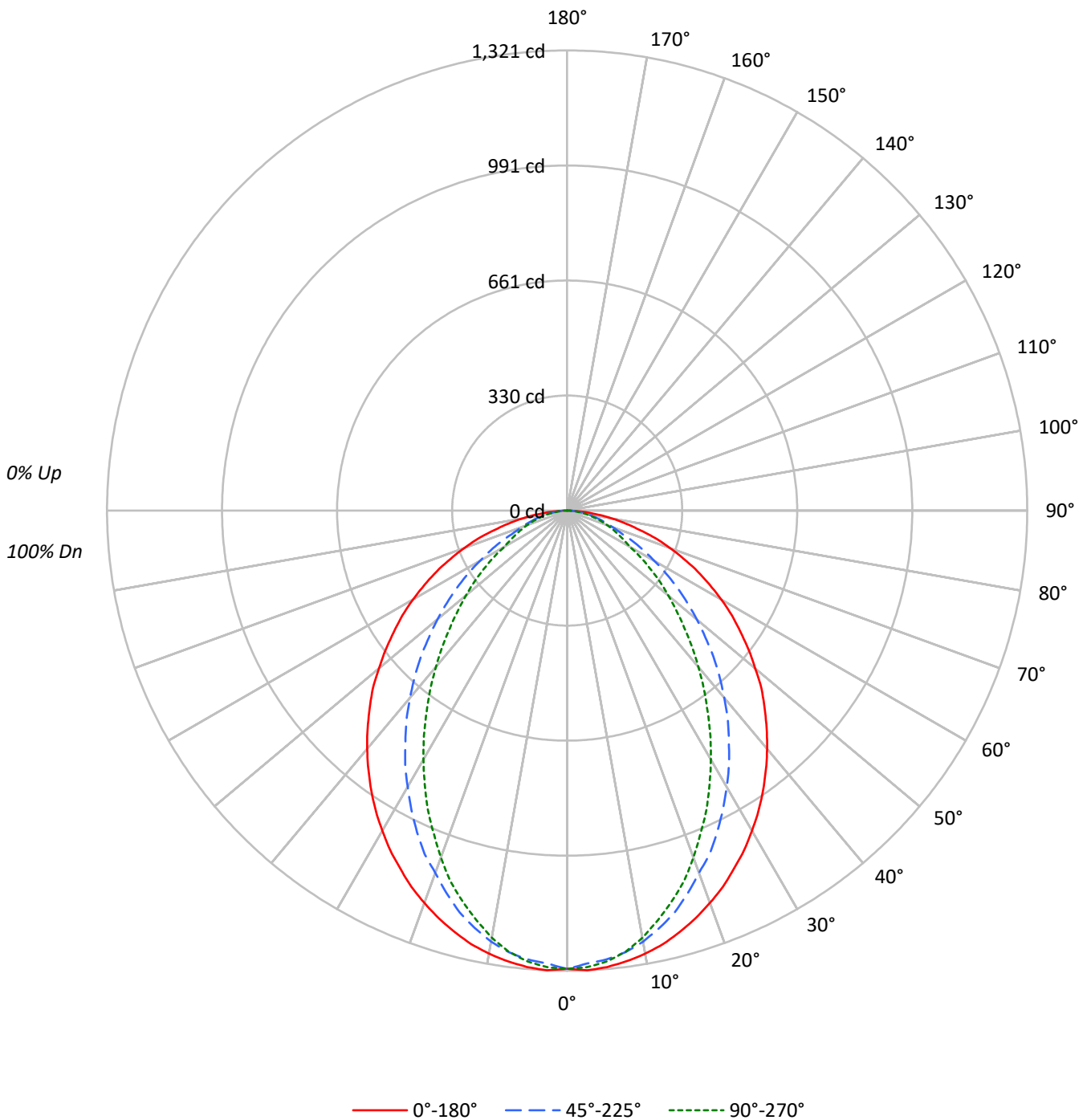
Lumens per Lamp: N/A
Luminaire Lumens: 2697.6 lumens
Efficiency: N/A
Efficacy: 85.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 0.15' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 31.5
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	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	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86																												
2	101	94	87	82	98	92	86	81	88	83	79	85	81	77	82	79	76	74																												
3	93	83	76	70	90	82	75	69	79	73	68	76	71	67	74	69	66	64																												
4	86	75	66	60	83	73	66	60	71	64	59	69	63	58	66	62	57	55																												
5	79	67	59	53	77	66	58	52	64	57	52	62	56	51	60	55	51	49																												
6	74	61	53	47	72	60	52	46	58	51	46	57	50	46	55	50	45	43																												
7	68	56	47	42	67	55	47	42	53	46	41	52	46	41	51	45	41	39																												
8	64	51	43	38	62	51	43	37	49	42	37	48	42	37	47	41	37	35																												
9	60	47	39	34	59	47	39	34	46	39	34	44	38	34	44	38	34	32																												
10	56	44	36	31	55	43	36	31	42	36	31	41	35	31	41	35	31	29																												

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	25055	25055	25055
5°	25151	24738	24847
10°	24980	24301	24080
15°	24685	23543	22895
20°	24294	22429	21486
25°	23829	21420	19892
30°	23338	20145	18148
35°	22802	18816	16335
40°	22209	17440	14561
45°	21582	15990	12809
50°	20885	14393	11234
55°	20164	12815	9687
60°	19497	11025	7912
65°	18619	9312	7315
70°	17509	7713	6828
75°	15955	7014	6263
80°	14315	6220	5605
85°	11911	5201	4961

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 21582 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	123.2	4.6
10°-20°	337.7	12.5
20°-30°	473.7	17.6
30°-40°	515.9	19.1
40°-50°	474.2	17.6
50°-60°	372.1	13.8
60°-70°	242.8	9.0
70°-80°	125.5	4.7
80°-90°	32.5	1.2
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
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0°-30°	934.5	34.6
0°-40°	1450.4	53.8
0°-60°	2296.8	85.1
0°-90°	2697.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2697.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1315	1315	1315	1315	1315	
5°	1315	1309	1294	1303	1300	125
15°	1252	1237	1194	1170	1161	353
25°	1134	1094	1019	969	946	523
35°	981	916	809	734	702	613
45°	801	720	594	507	476	619
55°	607	516	386	313	292	544
65°	413	313	207	168	162	408
75°	217	135	95	87	85	232
85°	54	26	24	23	23	63
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1315.4	1315.4	1315.4	1315.4	1315.4
2.5°	1321.0	1315.4	1301.7	1314.2	1312.0
5°	1315.4	1308.6	1293.8	1302.9	1299.5
7.5°	1305.2	1298.3	1279.0	1283.6	1277.9
10°	1291.5	1282.5	1256.4	1251.8	1245.0
12.5°	1274.5	1262.0	1226.8	1213.2	1204.1
15°	1251.8	1237.1	1193.9	1170.1	1161.0
17.5°	1226.8	1205.3	1151.9	1124.7	1115.6
20°	1198.5	1173.5	1106.5	1078.2	1060.0
22.5°	1169.0	1137.2	1068.0	1023.7	1002.1
25°	1133.8	1094.1	1019.2	969.2	946.5
27.5°	1099.7	1053.2	968.1	910.2	885.2
30°	1061.1	1010.1	915.9	848.9	825.1
32.5°	1022.6	963.5	864.8	792.2	764.9
35°	980.6	915.9	809.2	734.3	702.5
37.5°	937.4	870.5	758.1	675.3	644.6
40°	893.2	818.3	701.4	615.1	585.6
42.5°	847.8	771.7	648.0	559.5	531.1
45°	801.2	719.5	593.6	507.3	475.5
47.5°	757.0	668.5	537.9	456.2	425.6
50°	704.8	617.4	485.7	402.9	379.1
52.5°	657.1	566.3	434.7	355.2	334.8
55°	607.2	516.4	385.9	313.2	291.7
57.5°	560.6	464.2	337.1	271.2	250.8
60°	511.8	414.2	289.4	229.3	207.7
62.5°	460.8	363.2	247.4	190.7	183.9
65°	413.1	313.2	206.6	168.0	162.3
67.5°	362.0	266.7	164.6	147.5	141.9
70°	314.4	221.3	138.5	126.0	122.6
72.5°	267.8	178.2	116.9	106.7	103.3
75°	216.8	135.1	95.3	87.4	85.1
77.5°	172.5	95.3	76.0	70.4	68.1
80°	130.5	69.2	56.7	53.3	51.1
82.5°	89.7	46.5	39.7	37.5	36.3
85°	54.5	26.1	23.8	22.7	22.7
87.5°	21.6	10.2	10.2	9.1	9.1
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	22.44	23.96	22.80	24.27	24.59	18.32	19.84	18.69	20.16	20.47
	3H	24.20	25.57	24.58	25.90	26.26	19.62	20.98	19.99	21.31	21.67
	4H	24.87	26.15	25.27	26.50	26.87	20.12	21.40	20.52	21.75	22.13
	6H	25.36	26.54	25.77	26.91	27.30	20.51	21.69	20.92	22.06	22.45
	8H	25.52	26.65	25.95	27.04	27.44	20.63	21.76	21.06	22.15	22.55
	12H	25.63	26.71	26.06	27.09	27.52	20.71	21.79	21.14	22.17	22.60
4H	2H	22.54	23.82	22.94	24.17	24.55	19.03	20.31	19.43	20.66	21.04
	3H	24.48	25.54	24.89	25.94	26.34	20.50	21.57	20.91	21.96	22.37
	4H	25.22	26.18	25.65	26.59	27.03	21.11	22.07	21.54	22.48	22.92
	6H	25.81	26.64	26.27	27.09	27.55	21.60	22.43	22.06	22.88	23.34
	8H	26.03	26.80	26.49	27.25	27.72	21.76	22.54	22.22	22.98	23.45
	12H	26.19	26.88	26.67	27.36	27.83	21.88	22.57	22.36	23.05	23.52
8H	4H	25.25	26.02	25.71	26.47	26.94	21.47	22.25	21.93	22.69	23.16
	6H	25.88	26.53	26.38	27.02	27.49	22.06	22.71	22.56	23.20	23.67
	8H	26.13	26.71	26.65	27.22	27.71	22.28	22.86	22.80	23.37	23.86
	12H	26.35	26.86	26.86	27.35	27.91	22.47	22.98	22.98	23.47	24.03
12H	4H	25.23	25.93	25.71	26.40	26.88	21.51	22.21	21.99	22.69	23.16
	6H	25.86	26.44	26.38	26.95	27.44	22.13	22.70	22.64	23.21	23.70
	8H	26.15	26.66	26.66	27.15	27.72	22.40	22.91	22.91	23.40	23.97