

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: P243225

Luminaire Tested: S122RDRP-H865D835-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P243225
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-H865D835-X4F0-XX-UDD-F-W
Description: DEFINE 2 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

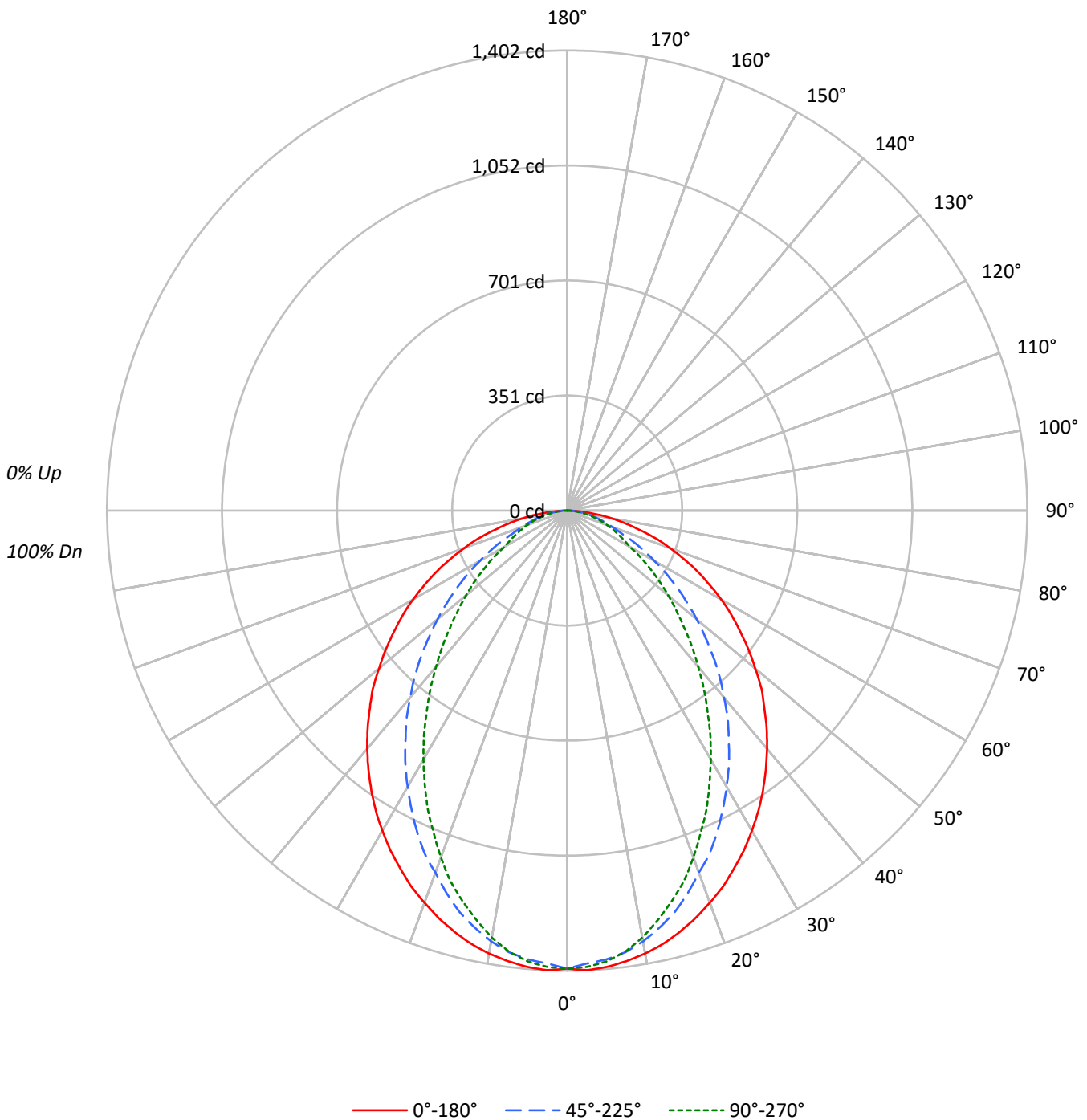
Lumens per Lamp: N/A
Luminaire Lumens: 2862.0 lumens
Efficiency: N/A
Efficacy: 90.9 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 0.15' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 31.5
Input Voltage (V): 120
Input Current (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

TEST NUMBER: P243225

CATALOG NUMBER: S122RDRP-H865D835-X4F0-XX-UDD-F-W

Luminous Intensity Polar Plot





TEST NUMBER: P243225

CATALOG NUMBER: S122RDRP-H865D835-X4F0-XX-UDD-F-W

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°	26583	26583	26583
5°	26685	26247	26361
10°	26504	25780	25548
15°	26190	24979	24291
20°	25773	23797	22796
25°	25281	22725	21105
30°	24761	21372	19254
35°	24190	19963	17330
40°	23562	18502	15449
45°	22900	16963	13590
50°	22157	15273	11918
55°	21393	13596	10278
60°	20686	11695	8396
65°	19754	9875	7761
70°	18573	8181	7240
75°	16927	7440	6646
80°	15192	6603	5945
85°	12632	5529	5267

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 22900 cd/sqm



TEST NUMBER: P243225

CATALOG NUMBER: S122RDRP-H865D835-X4F0-XX-UDD-F-W

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	130.7	4.6
10°-20°	358.2	12.5
20°-30°	502.5	17.6
30°-40°	547.4	19.1
40°-50°	503.1	17.6
50°-60°	394.8	13.8
60°-70°	257.6	9.0
70°-80°	133.2	4.7
80°-90°	34.5	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
0°-30°	991.5	34.6
0°-40°	1538.9	53.8
0°-60°	2436.8	85.1
0°-90°	2862.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2862.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1396	1396	1396	1396	1396	
5°	1396	1388	1373	1382	1379	132
15°	1328	1312	1267	1241	1232	374
25°	1203	1161	1081	1028	1004	554
35°	1040	972	858	779	745	651
45°	850	763	630	538	504	656
55°	644	548	409	332	310	577
65°	438	332	219	178	172	433
75°	230	143	101	93	90	246
85°	58	28	25	24	24	67
90°	0	0	0	0	0	



TEST NUMBER: P243225

CATALOG NUMBER: S122RDRP-H865D835-X4F0-XX-UDD-F-W

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1395.6	1395.6	1395.6	1395.6	1395.6
2.5°	1401.6	1395.6	1381.1	1394.3	1391.9
5°	1395.6	1388.3	1372.7	1382.3	1378.7
7.5°	1384.7	1377.5	1357.0	1361.8	1355.8
10°	1370.3	1360.6	1332.9	1328.1	1320.9
12.5°	1352.2	1339.0	1301.6	1287.2	1277.5
15°	1328.1	1312.5	1266.7	1241.4	1231.8
17.5°	1301.6	1278.8	1222.2	1193.3	1183.6
20°	1271.5	1245.0	1174.0	1143.9	1124.6
22.5°	1240.2	1206.5	1133.1	1086.1	1063.2
25°	1202.9	1160.8	1081.3	1028.3	1004.2
27.5°	1166.8	1117.4	1027.1	965.7	939.2
30°	1125.8	1071.6	971.7	900.7	875.4
32.5°	1084.9	1022.3	917.5	840.5	811.6
35°	1040.3	971.7	858.5	779.1	745.3
37.5°	994.6	923.5	804.3	716.4	683.9
40°	947.6	868.2	744.1	652.6	621.3
42.5°	899.5	818.8	687.5	593.6	563.5
45°	850.1	763.4	629.7	538.2	504.5
47.5°	803.1	709.2	570.7	484.0	451.5
50°	747.7	655.0	515.4	427.5	402.2
52.5°	697.2	600.8	461.2	376.9	355.2
55°	644.2	547.9	409.4	332.3	309.5
57.5°	594.8	492.5	357.6	287.8	266.1
60°	543.0	439.5	307.0	243.2	220.4
62.5°	488.9	385.3	262.5	202.3	195.1
65°	438.3	332.3	219.1	178.2	172.2
67.5°	384.1	283.0	174.6	156.5	150.5
70°	333.5	234.8	146.9	133.7	130.0
72.5°	284.2	189.0	124.0	113.2	109.6
75°	230.0	143.3	101.1	92.7	90.3
77.5°	183.0	101.1	80.7	74.7	72.2
80°	138.5	73.5	60.2	56.6	54.2
82.5°	95.1	49.4	42.1	39.7	38.5
85°	57.8	27.7	25.3	24.1	24.1
87.5°	22.9	10.8	10.8	9.6	9.6
90°	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P243225
 CATALOG NUMBER: S122RDRP-H865D835-X4F0-XX-UDD-F-W

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	22.64	24.17	23.01	24.48	24.79	18.53	20.05	18.89	20.37	20.68
	3H	24.41	25.78	24.79	26.10	26.47	19.82	21.19	20.20	21.52	21.88
	4H	25.07	26.35	25.47	26.70	27.08	20.33	21.61	20.73	21.96	22.34
	6H	25.56	26.74	25.97	27.11	27.50	20.71	21.90	21.12	22.26	22.65
	8H	25.73	26.85	26.15	27.24	27.64	20.84	21.96	21.26	22.35	22.75
	12H	25.84	26.91	26.27	27.30	27.73	20.92	22.00	21.35	22.38	22.81
4H	2H	22.74	24.03	23.14	24.37	24.75	19.24	20.52	19.64	20.87	21.24
	3H	24.68	25.75	25.09	26.15	26.55	20.71	21.77	21.12	22.17	22.57
	4H	25.43	26.38	25.86	26.80	27.24	21.31	22.27	21.75	22.69	23.13
	6H	26.02	26.85	26.48	27.29	27.75	21.81	22.64	22.26	23.08	23.54
	8H	26.23	27.01	26.69	27.45	27.92	21.97	22.74	22.43	23.19	23.66
	12H	26.39	27.09	26.88	27.57	28.04	22.08	22.78	22.57	23.26	23.73
8H	4H	25.45	26.23	25.92	26.67	27.14	21.67	22.45	22.14	22.90	23.36
	6H	26.09	26.73	26.59	27.22	27.70	22.27	22.91	22.76	23.40	23.88
	8H	26.34	26.92	26.85	27.43	27.91	22.49	23.07	23.00	23.58	24.06
	12H	26.55	27.06	27.06	27.56	28.12	22.67	23.18	23.18	23.67	24.24
12H	4H	25.44	26.13	25.92	26.61	27.08	21.72	22.41	22.20	22.89	23.36
	6H	26.07	26.65	26.58	27.16	27.65	22.33	22.91	22.85	23.42	23.91
	8H	26.35	26.86	26.86	27.36	27.92	22.61	23.12	23.12	23.61	24.17