

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: P242361

Luminaire Tested: S122RDRP-S865D830-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P242361
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-24)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122RDRP-S865D830-X4F0-XX-UDD-F-W
Description: DEFINE 2 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

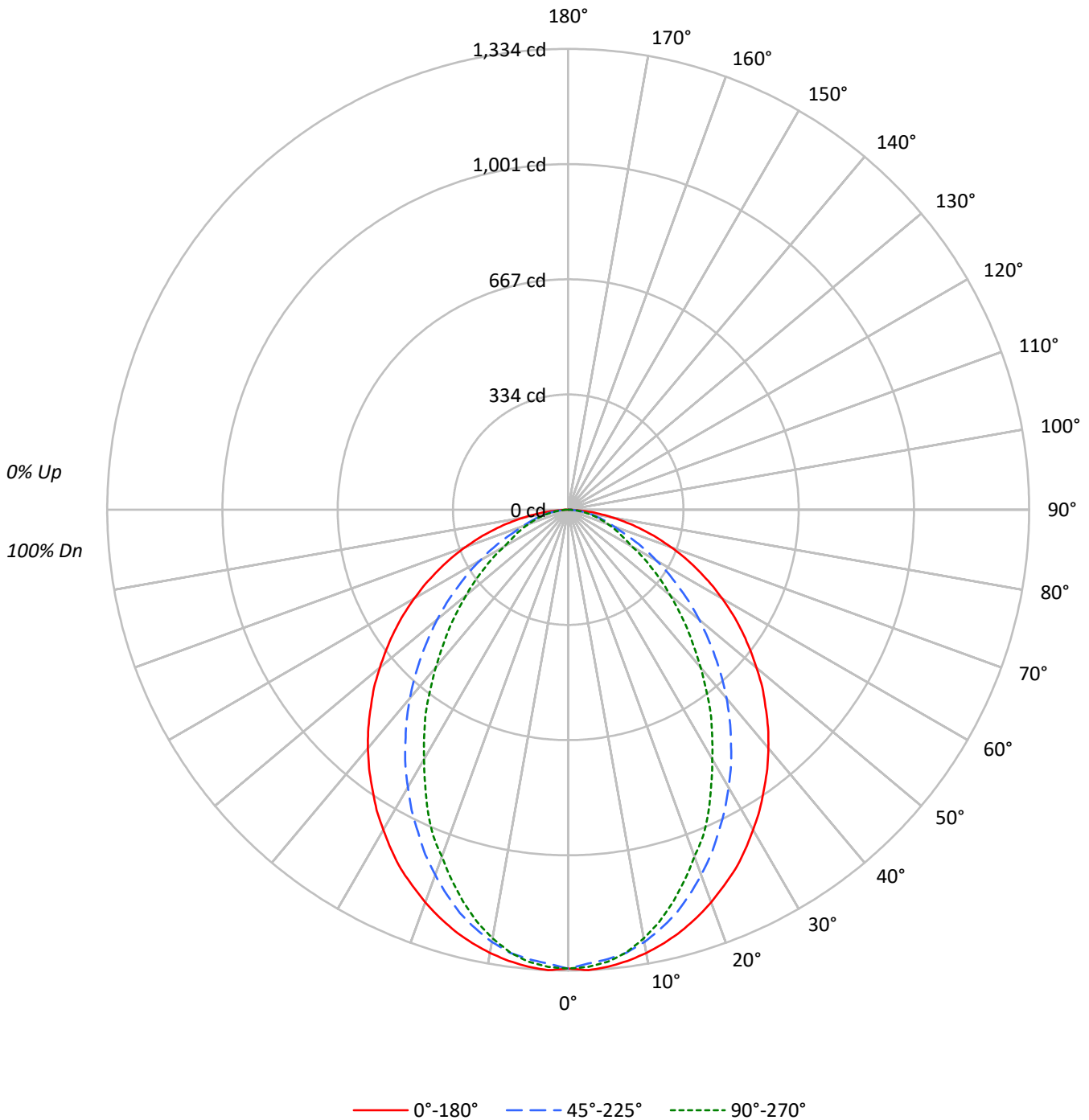
Lumens per Lamp: N/A
Luminaire Lumens: 2731.6 lumens
Efficiency: N/A
Efficacy: 78.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 0.15' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 34.8
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	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	78	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°	25299	25299	25299
5°	25396	24981	25120
10°	25200	24573	24365
15°	24912	23845	23157
20°	24511	22804	21661
25°	24100	21624	20210
30°	23530	20409	18348
35°	22974	19088	16714
40°	22416	17724	14825
45°	21757	16189	13113
50°	21087	14639	11432
55°	20397	12971	9820
60°	19596	11219	8152
65°	18691	9424	7423
70°	17604	7763	6828
75°	16279	7080	6366
80°	14370	6329	5803
85°	11299	4983	4983

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 21757 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	124.5	4.6
10°-20°	341.7	12.5
20°-30°	479.8	17.6
30°-40°	523.0	19.1
40°-50°	480.7	17.6
50°-60°	377.5	13.8
60°-70°	245.7	9.0
70°-80°	126.5	4.6
80°-90°	32.3	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°	946.0	34.6
0°-40°	1468.9	53.8
0°-60°	2327.1	85.2
0°-90°	2731.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2731.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1328	1328	1328	1328	1328	
5°	1328	1322	1306	1317	1314	126
15°	1263	1250	1209	1186	1174	356
25°	1147	1108	1029	980	962	527
35°	988	927	821	745	719	618
45°	808	727	601	516	487	624
55°	614	520	391	318	296	549
65°	415	317	209	168	165	411
75°	221	137	96	88	86	234
85°	52	26	23	23	23	62
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1328.2	1328.2	1328.2	1328.2	1328.2
2.5°	1334.2	1328.2	1315.0	1327.0	1324.6
5°	1328.2	1322.2	1306.5	1317.4	1313.8
7.5°	1317.4	1310.1	1293.3	1298.1	1292.1
10°	1302.9	1294.5	1270.5	1266.9	1259.7
12.5°	1284.9	1274.1	1241.6	1234.4	1221.2
15°	1263.3	1250.1	1209.2	1186.3	1174.3
17.5°	1238.0	1218.8	1168.3	1141.9	1122.6
20°	1209.2	1185.1	1125.0	1095.0	1068.6
22.5°	1177.9	1150.3	1080.6	1039.7	1021.7
25°	1146.7	1108.2	1028.9	979.6	961.6
27.5°	1109.4	1068.6	980.8	924.3	896.7
30°	1069.8	1024.1	927.9	866.6	834.2
32.5°	1031.3	976.0	877.4	805.3	775.3
35°	988.0	926.7	820.9	745.2	718.8
37.5°	946.0	879.8	768.1	685.1	655.1
40°	901.5	829.4	712.8	627.4	596.2
42.5°	855.8	778.9	657.5	568.5	538.5
45°	807.7	727.2	601.0	515.6	486.8
47.5°	762.0	676.7	546.9	461.6	435.1
50°	711.6	626.2	494.0	411.1	385.8
52.5°	662.3	572.1	443.5	364.2	341.4
55°	614.2	520.5	390.6	318.5	295.7
57.5°	564.9	468.8	343.8	276.5	257.2
60°	514.4	418.3	294.5	233.2	214.0
62.5°	465.2	369.0	252.4	194.7	185.1
65°	414.7	317.3	209.1	168.3	164.7
67.5°	366.6	269.2	168.3	147.8	144.2
70°	316.1	222.4	139.4	127.4	122.6
72.5°	268.0	179.1	116.6	107.0	104.6
75°	221.2	137.0	96.2	87.7	86.5
77.5°	174.3	97.4	75.7	70.9	68.5
80°	131.0	69.7	57.7	52.9	52.9
82.5°	91.3	46.9	39.7	37.3	37.3
85°	51.7	26.4	22.8	22.8	22.8
87.5°	19.2	9.6	9.6	8.4	8.4
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	22.46	23.98	22.82	24.29	24.61	18.42	19.94	18.79	20.26	20.57
	3H	24.22	25.59	24.60	25.92	26.28	19.69	21.05	20.06	21.38	21.74
	4H	24.89	26.17	25.29	26.52	26.90	20.19	21.47	20.59	21.82	22.19
	6H	25.38	26.56	25.79	26.93	27.32	20.57	21.75	20.98	22.12	22.51
	8H	25.55	26.67	25.97	27.06	27.46	20.69	21.82	21.12	22.21	22.61
	12H	25.65	26.73	26.08	27.11	27.54	20.77	21.85	21.20	22.23	22.66
4H	2H	22.56	23.84	22.96	24.19	24.57	19.12	20.40	19.52	20.74	21.12
	3H	24.50	25.56	24.91	25.96	26.36	20.56	21.62	20.97	22.02	22.42
	4H	25.25	26.20	25.68	26.62	27.06	21.16	22.11	21.59	22.53	22.97
	6H	25.84	26.67	26.30	27.11	27.57	21.65	22.48	22.10	22.92	23.38
	8H	26.05	26.83	26.52	27.27	27.74	21.81	22.59	22.27	23.03	23.50
	12H	26.21	26.90	26.69	27.38	27.85	21.93	22.62	22.41	23.10	23.57
8H	4H	25.27	26.05	25.73	26.49	26.96	21.51	22.29	21.98	22.73	23.20
	6H	25.91	26.55	26.40	27.04	27.52	22.10	22.74	22.59	23.23	23.71
	8H	26.16	26.73	26.67	27.24	27.73	22.32	22.90	22.83	23.41	23.89
	12H	26.36	26.87	26.87	27.36	27.93	22.50	23.01	23.01	23.50	24.07
12H	4H	25.26	25.95	25.74	26.43	26.90	21.55	22.25	22.04	22.73	23.20
	6H	25.89	26.47	26.40	26.98	27.46	22.16	22.74	22.68	23.25	23.74
	8H	26.17	26.68	26.68	27.18	27.74	22.44	22.95	22.95	23.44	24.00