

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: P243230

Luminaire Tested: S122RDRP-H865D840-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P243230
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-H865D840-X4F0-XX-UDD-F-W
Description: DEFINE 2 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

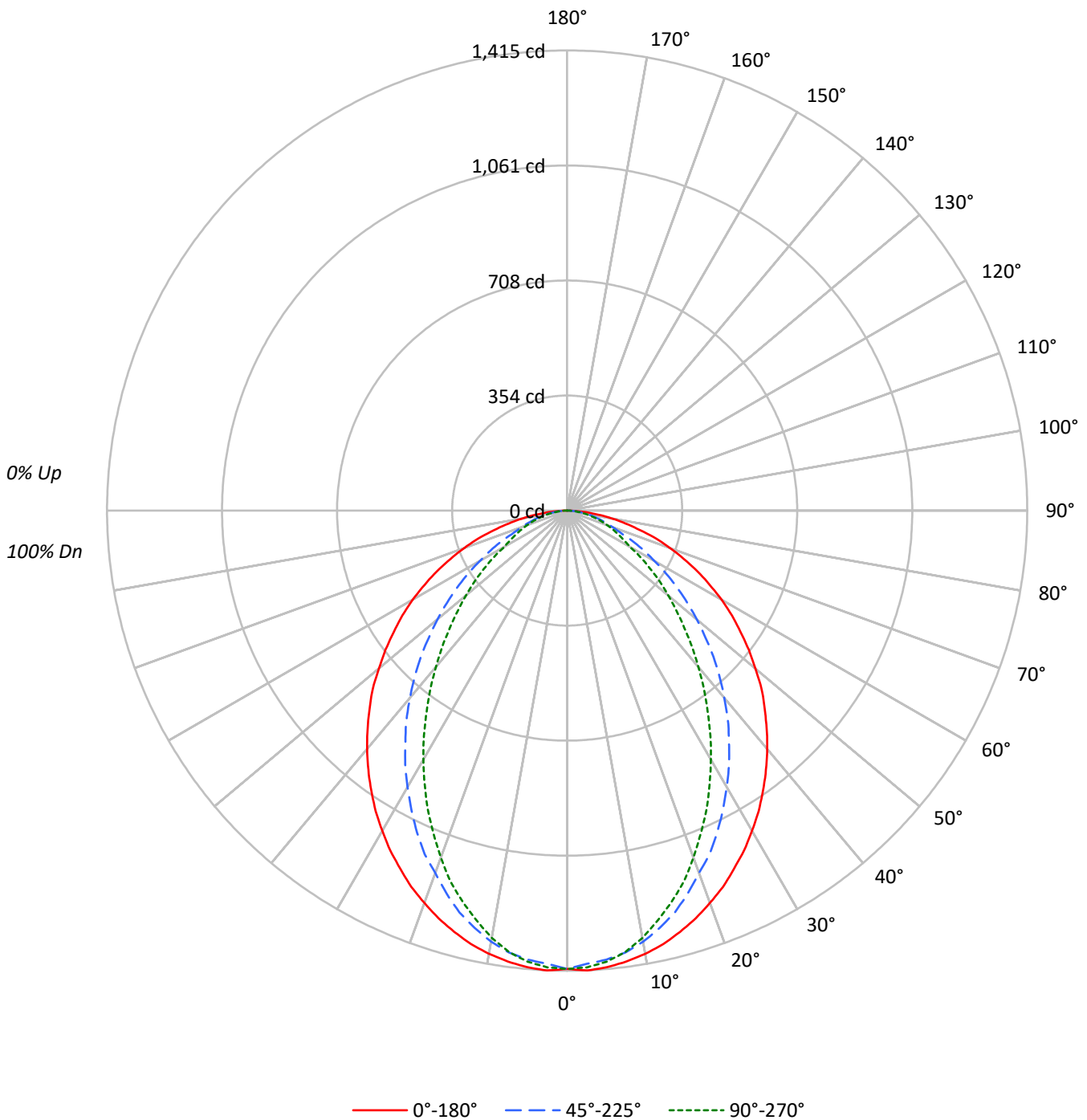
Lumens per Lamp: N/A
Luminaire Lumens: 2890.3 lumens
Efficiency: N/A
Efficacy: 91.8 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 0.15' x L: 3.88' x H: 0')
CIE Type: Direct

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	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°	26844	26844	26844
5°	26946	26505	26621
10°	26765	26036	25800
15°	26448	25225	24529
20°	26029	24032	23021
25°	25531	22948	21313
30°	25005	21583	19443
35°	24430	20160	17503
40°	23796	18686	15600
45°	23126	17132	13725
50°	22376	15421	12034
55°	21602	13728	10378
60°	20892	11813	8476
65°	19948	9974	7838
70°	18757	8259	7312
75°	17096	7514	6712
80°	15335	6669	6000
85°	12763	5573	5311

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 23126 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	132.0	4.6
10°-20°	361.8	12.5
20°-30°	507.5	17.6
30°-40°	552.8	19.1
40°-50°	508.1	17.6
50°-60°	398.7	13.8
60°-70°	260.1	9.0
70°-80°	134.5	4.7
80°-90°	34.8	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°	1001.3	34.6
0°-40°	1554.0	53.8
0°-60°	2460.9	85.1
0°-90°	2890.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2890.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1409	1409	1409	1409	1409	
5°	1409	1402	1386	1396	1392	134
15°	1341	1325	1279	1254	1244	378
25°	1215	1172	1092	1038	1014	560
35°	1051	981	867	787	753	657
45°	858	771	636	544	510	663
55°	650	553	413	336	312	583
65°	443	336	221	180	174	437
75°	232	145	102	94	91	248
85°	58	28	26	24	24	67
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1409.3	1409.3	1409.3	1409.3	1409.3
2.5°	1415.4	1409.3	1394.7	1408.1	1405.7
5°	1409.3	1402.0	1386.2	1395.9	1392.3
7.5°	1398.4	1391.1	1370.4	1375.3	1369.2
10°	1383.8	1374.1	1346.1	1341.2	1333.9
12.5°	1365.5	1352.2	1314.5	1299.9	1290.2
15°	1341.2	1325.4	1279.2	1253.7	1243.9
17.5°	1314.5	1291.4	1234.2	1205.0	1195.3
20°	1284.1	1257.3	1185.6	1155.2	1135.7
22.5°	1252.5	1218.4	1144.2	1096.8	1073.7
25°	1214.8	1172.2	1091.9	1038.4	1014.1
27.5°	1178.3	1128.4	1037.2	975.2	948.5
30°	1136.9	1082.2	981.3	909.6	884.0
32.5°	1095.6	1032.4	926.6	848.8	819.6
35°	1050.6	981.3	867.0	786.7	752.7
37.5°	1004.4	932.7	812.3	723.5	690.7
40°	957.0	876.7	751.5	659.1	627.4
42.5°	908.3	826.9	694.3	599.5	569.1
45°	858.5	770.9	636.0	543.5	509.5
47.5°	811.1	716.2	576.4	488.8	456.0
50°	755.1	661.5	520.4	431.7	406.1
52.5°	704.1	606.8	465.7	380.6	358.7
55°	650.5	553.3	413.4	335.6	312.5
57.5°	600.7	497.3	361.1	290.6	268.7
60°	548.4	443.8	310.1	245.6	222.5
62.5°	493.7	389.1	265.1	204.3	197.0
65°	442.6	335.6	221.3	180.0	173.9
67.5°	387.9	285.8	176.3	158.1	152.0
70°	336.8	237.1	148.3	135.0	131.3
72.5°	287.0	190.9	125.2	114.3	110.7
75°	232.3	144.7	102.1	93.6	91.2
77.5°	184.8	102.1	81.5	75.4	73.0
80°	139.8	74.2	60.8	57.2	54.7
82.5°	96.1	49.9	42.6	40.1	38.9
85°	58.4	28.0	25.5	24.3	24.3
87.5°	23.1	10.9	10.9	9.7	9.7
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	22.68	24.20	23.04	24.51	24.83	18.56	20.08	18.93	20.40	20.71
	3H	24.44	25.81	24.82	26.14	26.50	19.86	21.22	20.23	21.55	21.91
	4H	25.11	26.39	25.51	26.74	27.11	20.36	21.64	20.76	21.99	22.37
	6H	25.59	26.78	26.01	27.14	27.54	20.75	21.93	21.16	22.30	22.69
	8H	25.76	26.89	26.19	27.28	27.68	20.87	22.00	21.30	22.39	22.79
	12H	25.87	26.95	26.30	27.33	27.76	20.95	22.03	21.38	22.41	22.84
4H	2H	22.78	24.06	23.18	24.41	24.79	19.27	20.55	19.67	20.90	21.28
	3H	24.72	25.78	25.13	26.18	26.58	20.74	21.80	21.15	22.20	22.61
	4H	25.46	26.42	25.89	26.83	27.27	21.35	22.30	21.78	22.72	23.16
	6H	26.05	26.88	26.51	27.33	27.79	21.84	22.67	22.30	23.12	23.57
	8H	26.27	27.04	26.73	27.49	27.95	22.00	22.78	22.46	23.22	23.69
	12H	26.43	27.12	26.91	27.60	28.07	22.12	22.81	22.60	23.29	23.76
8H	4H	25.49	26.26	25.95	26.71	27.17	21.71	22.49	22.17	22.93	23.40
	6H	26.12	26.77	26.62	27.26	27.73	22.30	22.95	22.80	23.44	23.91
	8H	26.37	26.95	26.89	27.46	27.95	22.52	23.10	23.04	23.61	24.10
	12H	26.59	27.10	27.10	27.59	28.15	22.70	23.22	23.21	23.71	24.27
12H	4H	25.47	26.17	25.95	26.64	27.11	21.75	22.45	22.23	22.93	23.40
	6H	26.10	26.68	26.62	27.19	27.68	22.37	22.94	22.88	23.45	23.94
	8H	26.39	26.90	26.90	27.39	27.95	22.64	23.15	23.15	23.64	24.21