

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: P243246

Luminaire Tested: S122RDRP-H1005D940-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P243246
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-H1005D940-X4F0-XX-UDD-F-W
Description: DEFINE 2 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

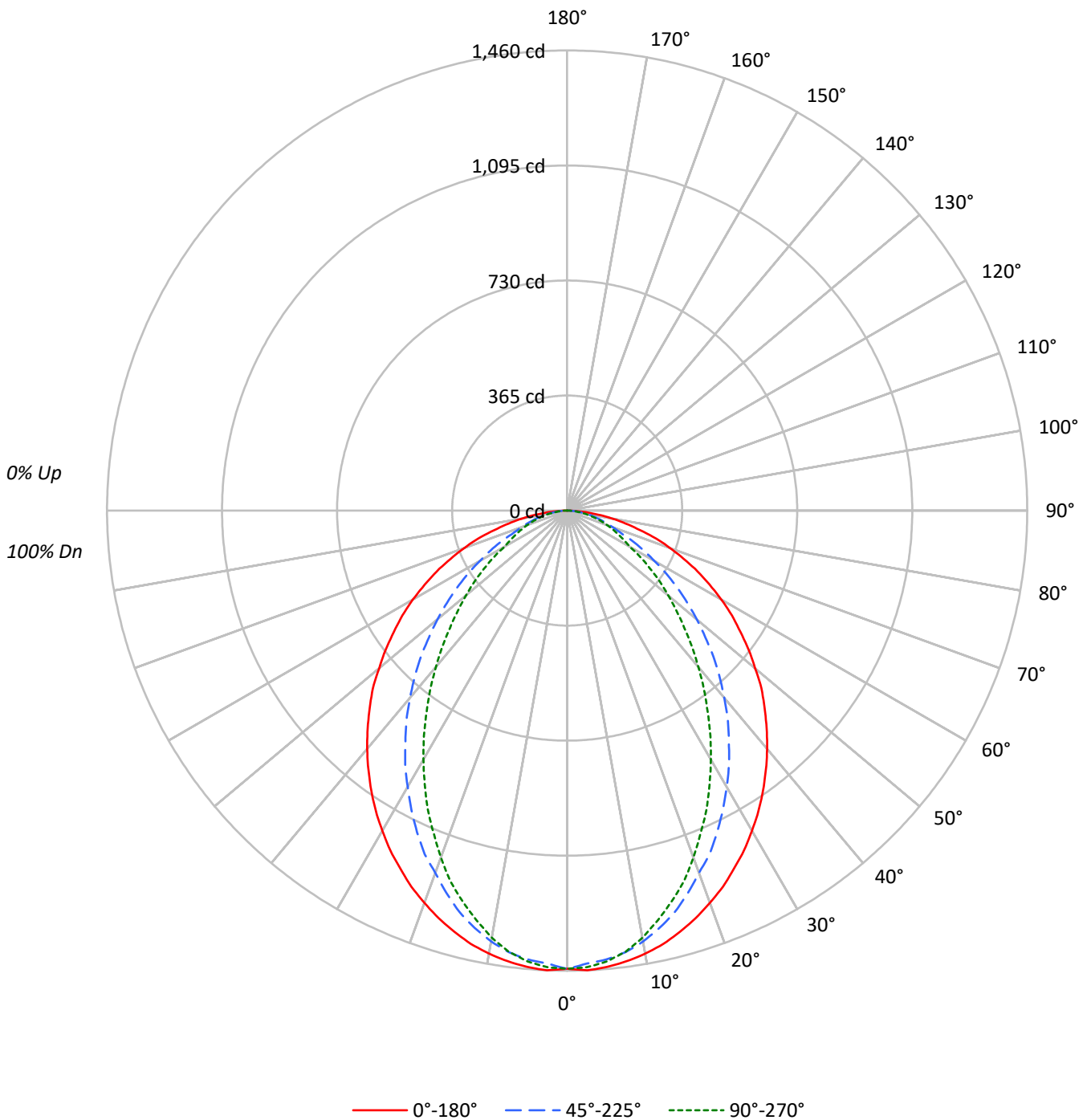
Lumens per Lamp: N/A
Luminaire Lumens: 2981.4 lumens
Efficiency: N/A
Efficacy: 79.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 0.15' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 37.7
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	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					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°	27690	27690	27690
5°	27795	27340	27461
10°	27608	26856	26614
15°	27282	26020	25302
20°	26848	24788	23746
25°	26334	23673	21986
30°	25795	22263	20057
35°	25199	20795	18054
40°	24544	19275	16093
45°	23853	17671	14156
50°	23081	15907	12413
55°	22283	14163	10706
60°	21551	12183	8743
65°	20579	10290	8086
70°	19347	8521	7546
75°	17633	7757	6925
80°	15817	6878	6187
85°	13157	5748	5486

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 23853 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	136.2	4.6
10°-20°	373.2	12.5
20°-30°	523.5	17.6
30°-40°	570.2	19.1
40°-50°	524.1	17.6
50°-60°	411.3	13.8
60°-70°	268.3	9.0
70°-80°	138.8	4.7
80°-90°	35.9	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°	1032.8	34.6
0°-40°	1603.0	53.8
0°-60°	2538.4	85.1
0°-90°	2981.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2981.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1454	1454	1454	1454	1454	
5°	1454	1446	1430	1440	1436	138
15°	1384	1367	1320	1293	1283	390
25°	1253	1209	1126	1071	1046	578
35°	1084	1012	894	812	776	678
45°	886	795	656	561	526	684
55°	671	571	426	346	322	601
65°	457	346	228	186	179	451
75°	240	149	105	97	94	256
85°	60	29	26	25	25	69
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1453.7	1453.7	1453.7	1453.7	1453.7
2.5°	1460.0	1453.7	1438.7	1452.5	1450.0
5°	1453.7	1446.2	1429.9	1439.9	1436.2
7.5°	1442.4	1434.9	1413.6	1418.6	1412.3
10°	1427.4	1417.4	1388.5	1383.5	1376.0
12.5°	1408.6	1394.8	1355.9	1340.8	1330.8
15°	1383.5	1367.2	1319.5	1293.2	1283.1
17.5°	1355.9	1332.1	1273.1	1243.0	1233.0
20°	1324.5	1296.9	1222.9	1191.6	1171.5
22.5°	1291.9	1256.8	1180.3	1131.4	1107.5
25°	1253.0	1209.1	1126.4	1071.2	1046.1
27.5°	1215.4	1164.0	1069.9	1005.9	978.4
30°	1172.8	1116.3	1012.2	938.2	911.9
32.5°	1130.1	1064.9	955.8	875.5	845.4
35°	1083.7	1012.2	894.3	811.5	776.4
37.5°	1036.0	962.0	837.9	746.3	712.4
40°	987.1	904.3	775.2	679.8	647.2
42.5°	937.0	852.9	716.2	618.4	587.0
45°	885.5	795.2	656.0	560.7	525.5
47.5°	836.6	738.8	594.5	504.2	470.4
50°	778.9	682.3	536.8	445.3	418.9
52.5°	726.2	625.9	480.4	392.6	370.0
55°	671.0	570.7	426.5	346.2	322.4
57.5°	619.6	513.0	372.5	299.8	277.2
60°	565.7	457.8	319.8	253.4	229.5
62.5°	509.2	401.4	273.4	210.7	203.2
65°	456.6	346.2	228.3	185.6	179.4
67.5°	400.1	294.8	181.9	163.1	156.8
70°	347.4	244.6	153.0	139.2	135.5
72.5°	296.0	196.9	129.2	117.9	114.1
75°	239.6	149.3	105.4	96.6	94.1
77.5°	190.7	105.4	84.0	77.8	75.3
80°	144.2	76.5	62.7	59.0	56.4
82.5°	99.1	51.4	43.9	41.4	40.1
85°	60.2	28.8	26.3	25.1	25.1
87.5°	23.8	11.3	11.3	10.0	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	22.78	24.31	23.15	24.62	24.94	18.67	20.19	19.04	20.51	20.82
	3H	24.55	25.92	24.93	26.24	26.61	19.97	21.33	20.34	21.66	22.02
	4H	25.21	26.49	25.61	26.84	27.22	20.47	21.75	20.87	22.10	22.48
	6H	25.70	26.89	26.12	27.25	27.64	20.86	22.04	21.27	22.41	22.80
	8H	25.87	26.99	26.29	27.38	27.78	20.98	22.10	21.40	22.49	22.90
	12H	25.98	27.06	26.41	27.44	27.87	21.06	22.14	21.49	22.52	22.95
4H	2H	22.89	24.17	23.29	24.52	24.89	19.38	20.66	19.78	21.01	21.39
	3H	24.82	25.89	25.24	26.29	26.69	20.85	21.91	21.26	22.31	22.71
	4H	25.57	26.53	26.00	26.94	27.38	21.46	22.41	21.89	22.83	23.27
	6H	26.16	26.99	26.62	27.44	27.89	21.95	22.78	22.41	23.22	23.68
	8H	26.37	27.15	26.84	27.60	28.06	22.11	22.89	22.57	23.33	23.80
	12H	26.54	27.23	27.02	27.71	28.18	22.23	22.92	22.71	23.40	23.87
8H	4H	25.59	26.37	26.06	26.82	27.28	21.82	22.60	22.28	23.04	23.51
	6H	26.23	26.87	26.73	27.37	27.84	22.41	23.05	22.91	23.54	24.02
	8H	26.48	27.06	26.99	27.57	28.06	22.63	23.21	23.15	23.72	24.21
	12H	26.69	27.20	27.20	27.70	28.26	22.81	23.32	23.32	23.82	24.38
12H	4H	25.58	26.27	26.06	26.75	27.22	21.86	22.56	22.34	23.03	23.51
	6H	26.21	26.79	26.73	27.30	27.79	22.47	23.05	22.99	23.56	24.05
	8H	26.50	27.01	27.01	27.50	28.06	22.75	23.26	23.26	23.75	24.32