

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: P242719

Luminaire Tested: S124RDRP-S1020D930-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P242719
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-26)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124RDRP-S1020D930-X4F0-XX-UDD-F-W
Description: DEFINE 4 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 3000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

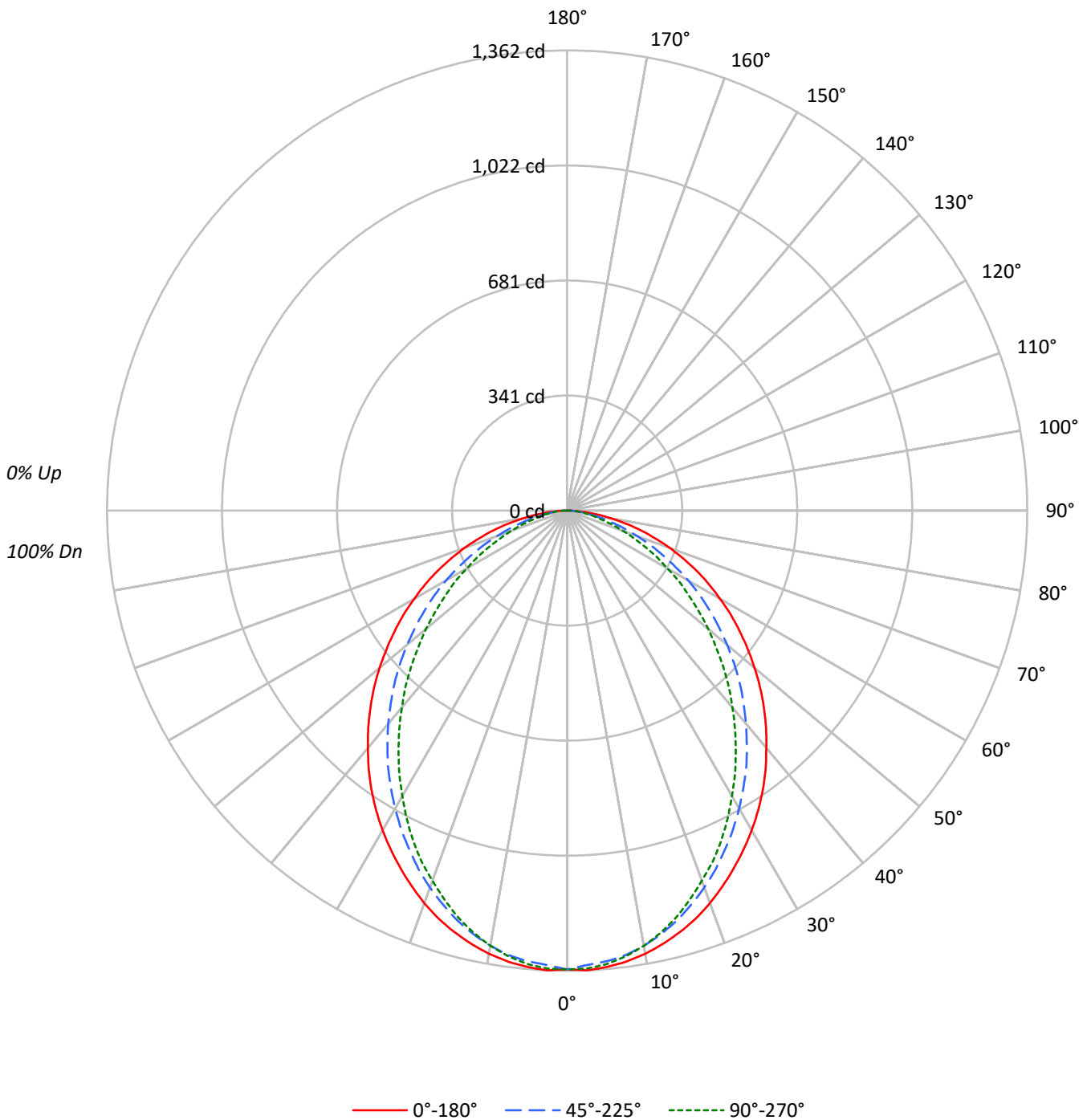
Lumens per Lamp: N/A
Luminaire Lumens: 3137.5 lumens
Efficiency: N/A
Efficacy: 90.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24
Luminous Opening: Rectangular (W 0.31' x L: 3.88' x H: 0')
CIE Type: Direct

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	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	105	101	98	107	103	99	96	99	96	93	95	92	90	91	89	87	85																												
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	74	72																												
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62																												
4	84	73	65	58	82	72	64	58	69	62	57	67	61	56	65	60	56	54																												
5	78	66	57	51	76	65	56	50	62	55	50	61	54	49	59	53	49	47																												
6	72	59	51	45	70	58	50	44	57	49	44	55	49	44	53	48	43	41																												
7	67	54	46	40	65	53	45	40	52	45	39	50	44	39	49	43	39	37																												
8	63	50	41	36	61	49	41	36	48	40	35	46	40	35	45	39	35	33																												
9	59	46	38	32	57	45	37	32	44	37	32	43	36	32	42	36	32	30																												
10	55	42	35	29	54	42	34	29	41	34	29	40	33	29	39	33	29	27																												

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	12070	12070	12070
5°	12098	11949	12024
10°	12022	11806	11806
15°	11883	11558	11472
20°	11694	11231	11025
25°	11452	10849	10575
30°	11216	10448	10009
35°	10956	10030	9443
40°	10641	9554	8832
45°	10351	9084	8207
50°	10022	8541	7548
55°	9667	7976	6831
60°	9278	7356	6100
65°	8922	6583	5380
70°	8402	5728	4566
75°	7748	4750	3713
80°	6757	3619	3404
85°	5722	3284	3080

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 10351 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	127.7	4.1
10°-20°	356.0	11.3
20°-30°	514.0	16.4
30°-40°	582.5	18.6
40°-50°	562.4	17.9
50°-60°	467.6	14.9
60°-70°	322.7	10.3
70°-80°	163.1	5.2
80°-90°	41.4	1.3
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°	997.7	31.8
0°-40°	1580.2	50.4
0°-60°	2610.2	83.2
0°-90°	3137.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3137.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1358	1358	1358	1358	1358	
5°	1356	1352	1339	1350	1348	129
15°	1291	1282	1256	1254	1247	364
25°	1168	1149	1106	1089	1078	538
35°	1010	976	924	889	870	631
45°	823	785	723	672	653	635
55°	624	582	515	461	441	558
65°	424	380	313	268	256	419
75°	226	187	138	114	108	238
85°	56	35	32	30	30	65
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1357.9	1357.9	1357.9	1357.9	1357.9
2.5°	1362.0	1357.9	1346.4	1357.9	1356.8
5°	1355.8	1351.6	1339.1	1349.5	1347.5
7.5°	1346.4	1342.3	1326.7	1333.9	1330.8
10°	1331.9	1326.7	1308.0	1312.1	1308.0
12.5°	1313.1	1306.9	1284.0	1286.1	1279.9
15°	1291.3	1282.0	1256.0	1253.9	1246.6
17.5°	1266.4	1252.8	1222.7	1217.5	1207.1
20°	1236.2	1222.7	1187.3	1179.0	1165.5
22.5°	1202.9	1187.3	1148.9	1135.4	1125.0
25°	1167.6	1148.9	1106.2	1088.6	1078.2
27.5°	1131.2	1108.3	1063.6	1042.8	1028.3
30°	1092.7	1066.7	1017.9	991.9	975.2
32.5°	1052.2	1022.0	971.1	939.9	924.3
35°	1009.6	976.3	924.3	888.9	870.2
37.5°	964.8	930.5	873.4	834.9	816.2
40°	917.0	882.7	823.4	779.8	761.1
42.5°	871.3	834.9	772.5	727.8	708.0
45°	823.4	785.0	722.6	671.7	652.9
47.5°	774.6	735.1	670.6	617.6	596.8
50°	724.7	684.1	617.6	565.6	545.8
52.5°	673.7	634.2	565.6	512.6	491.8
55°	623.8	582.2	514.7	460.6	440.8
57.5°	575.0	531.3	464.7	409.6	395.1
60°	521.9	480.3	413.8	359.7	343.1
62.5°	474.1	430.4	361.8	313.0	300.5
65°	424.2	379.5	313.0	268.2	255.8
67.5°	372.2	329.6	267.2	227.7	213.1
70°	323.3	279.7	220.4	186.1	175.7
72.5°	271.4	232.9	177.8	149.7	140.4
75°	225.6	187.1	138.3	114.4	108.1
77.5°	177.8	144.5	102.9	86.3	84.2
80°	132.0	101.9	70.7	67.6	66.5
82.5°	92.5	65.5	50.9	48.9	47.8
85°	56.1	35.4	32.2	30.2	30.2
87.5°	23.9	15.6	14.6	13.5	14.6
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	20.00	21.56	20.36	21.88	22.19	18.03	19.59	18.39	19.91	20.22
	3H	21.77	23.18	22.14	23.50	23.86	19.28	20.69	19.66	21.02	21.38
	4H	22.43	23.75	22.83	24.10	24.48	19.66	20.98	20.06	21.33	21.71
	6H	22.90	24.13	23.32	24.49	24.88	19.92	21.14	20.33	21.51	21.90
	8H	23.05	24.22	23.48	24.61	25.01	20.01	21.18	20.44	21.57	21.97
	12H	23.15	24.27	23.58	24.65	25.08	20.08	21.19	20.51	21.57	22.00
4H	2H	20.33	21.66	20.73	22.01	22.38	18.72	20.05	19.12	20.39	20.77
	3H	22.30	23.40	22.71	23.80	24.20	20.16	21.26	20.57	21.66	22.06
	4H	23.08	24.07	23.51	24.49	24.93	20.61	21.60	21.04	22.02	22.45
	6H	23.68	24.54	24.13	24.99	25.44	20.96	21.82	21.41	22.27	22.72
	8H	23.87	24.68	24.33	25.12	25.59	21.09	21.89	21.55	22.34	22.80
	12H	24.01	24.73	24.49	25.21	25.68	21.18	21.91	21.66	22.38	22.85
8H	4H	23.18	23.98	23.64	24.43	24.89	20.92	21.73	21.39	22.18	22.64
	6H	23.85	24.52	24.34	25.01	25.48	21.36	22.02	21.85	22.51	22.99
	8H	24.09	24.69	24.60	25.20	25.69	21.54	22.14	22.05	22.64	23.13
	12H	24.29	24.82	24.79	25.31	25.87	21.69	22.22	22.20	22.71	23.28
12H	4H	23.17	23.89	23.65	24.37	24.84	20.96	21.69	21.44	22.16	22.63
	6H	23.84	24.44	24.35	24.95	25.43	21.41	22.01	21.92	22.52	23.00
	8H	24.12	24.65	24.63	25.14	25.70	21.64	22.17	22.15	22.66	23.22