

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: P242724

Luminaire Tested: S124RDRP-S1020D935-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P242724
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-S1020D935-X4F0-XX-UDD-F-W
Description: DEFINE 4 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 3500K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

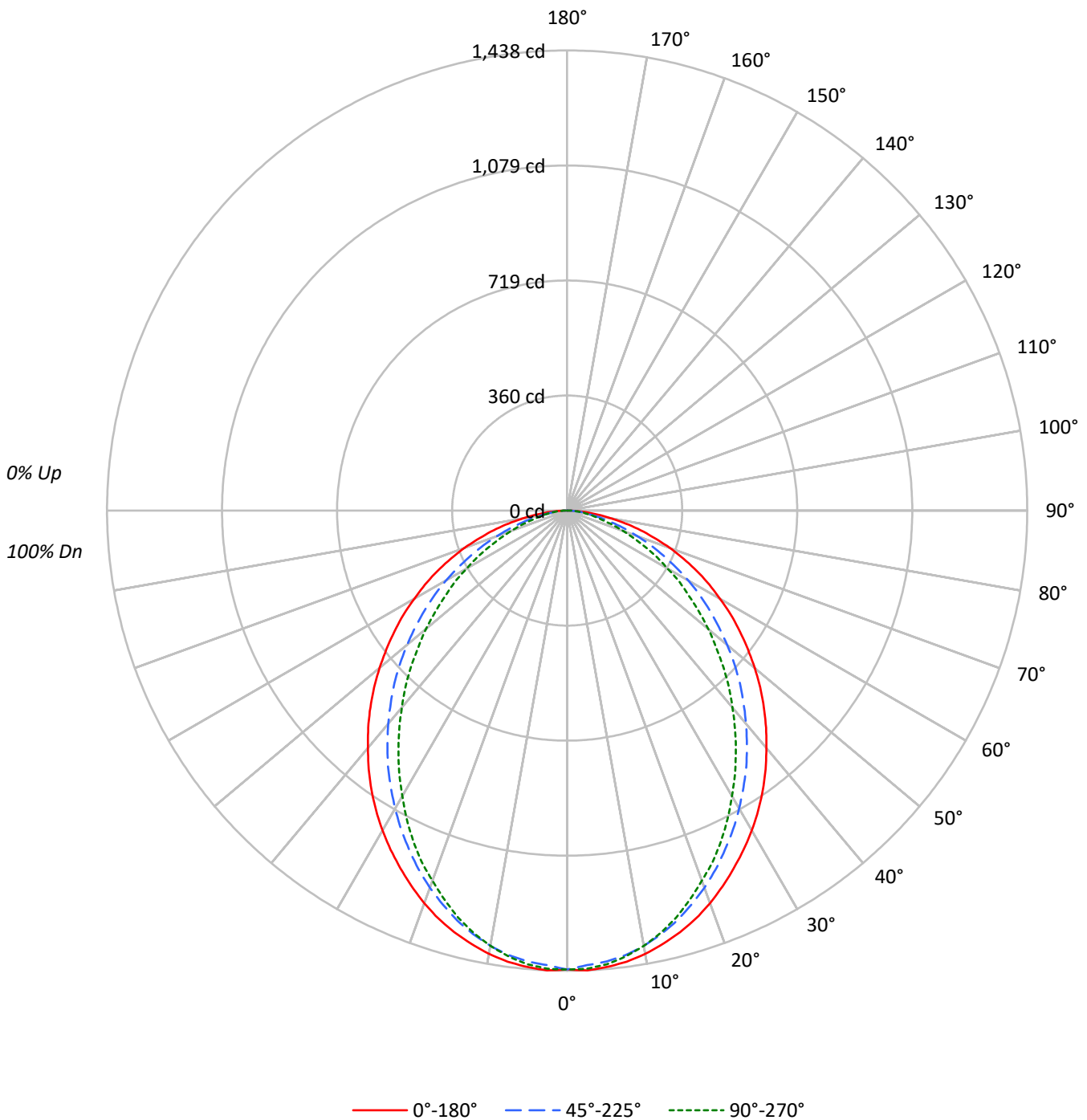
Lumens per Lamp: N/A
Luminaire Lumens: 3313.4 lumens
Efficiency: N/A
Efficacy: 95.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24
Luminous Opening: Rectangular (W 0.31' x L: 3.88' x H: 0')
CIE Type: Direct

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	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	110	105	101	98	107	103	99	96	99	96	93	95	92	90	91	89	87	85					85			
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	74	72					72			
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62					62			
4	84	73	65	58	82	72	64	58	69	62	57	67	61	56	65	60	56	54					54			
5	78	66	57	51	76	65	56	50	62	55	50	61	54	49	59	53	49	47					47			
6	72	59	51	45	70	58	50	44	57	49	44	55	49	44	53	48	43	41					41			
7	67	54	46	40	65	53	45	40	52	45	39	50	44	39	49	43	39	37					37			
8	63	50	41	36	61	49	41	36	48	40	35	46	40	35	45	39	35	33					33			
9	59	46	38	32	57	45	37	32	44	37	32	43	36	32	42	36	32	30					30			
10	55	42	35	29	54	42	34	29	41	34	29	40	33	29	39	33	29	27					27			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	12747	12747	12747
5°	12776	12619	12697
10°	12695	12468	12468
15°	12549	12206	12115
20°	12349	11861	11643
25°	12093	11458	11167
30°	11845	11033	10571
35°	11569	10592	9972
40°	11237	10091	9326
45°	10932	9593	8668
50°	10583	9019	7971
55°	10210	8423	7214
60°	9799	7769	6441
65°	9423	6951	5681
70°	8875	6050	4824
75°	8184	5014	3922
80°	7136	3824	3599
85°	6048	3468	3243

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 10932 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	134.8	4.1
10°-20°	376.0	11.3
20°-30°	542.8	16.4
30°-40°	615.2	18.6
40°-50°	594.0	17.9
50°-60°	493.8	14.9
60°-70°	340.9	10.3
70°-80°	172.2	5.2
80°-90°	43.7	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°	1053.6	31.8
0°-40°	1668.8	50.4
0°-60°	2756.5	83.2
0°-90°	3313.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3313.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1434	1434	1434	1434	1434	
5°	1432	1427	1414	1425	1423	136
15°	1364	1354	1326	1324	1316	384
25°	1233	1213	1168	1150	1139	568
35°	1066	1031	976	939	919	666
45°	870	829	763	709	690	671
55°	659	615	544	486	466	589
65°	448	401	330	283	270	442
75°	238	198	146	121	114	251
85°	59	37	34	32	32	69
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1434.0	1434.0	1434.0	1434.0	1434.0
2.5°	1438.4	1434.0	1421.9	1434.0	1432.9
5°	1431.8	1427.4	1414.2	1425.2	1423.0
7.5°	1421.9	1417.5	1401.0	1408.7	1405.4
10°	1406.5	1401.0	1381.3	1385.7	1381.3
12.5°	1386.8	1380.2	1356.0	1358.2	1351.6
15°	1363.7	1353.8	1326.4	1324.2	1316.5
17.5°	1337.3	1323.1	1291.2	1285.7	1274.8
20°	1305.5	1291.2	1253.9	1245.1	1230.8
22.5°	1270.4	1253.9	1213.3	1199.0	1188.0
25°	1233.0	1213.3	1168.3	1149.6	1138.6
27.5°	1194.6	1170.5	1123.2	1101.3	1085.9
30°	1154.0	1126.5	1074.9	1047.5	1029.9
32.5°	1111.2	1079.3	1025.5	992.6	976.1
35°	1066.1	1031.0	976.1	938.8	919.0
37.5°	1018.9	982.7	922.3	881.7	861.9
40°	968.4	932.2	869.6	823.5	803.7
42.5°	920.1	881.7	815.8	768.6	747.7
45°	869.6	829.0	763.1	709.3	689.5
47.5°	818.0	776.3	708.2	652.2	630.2
50°	765.3	722.5	652.2	597.3	576.4
52.5°	711.5	669.8	597.3	541.3	519.3
55°	658.8	614.9	543.5	486.4	465.5
57.5°	607.2	561.1	490.8	432.6	417.2
60°	551.2	507.3	437.0	379.9	362.3
62.5°	500.7	454.6	382.1	330.5	317.3
65°	448.0	400.8	330.5	283.3	270.1
67.5°	393.1	348.1	282.2	240.5	225.1
70°	341.5	295.4	232.8	196.5	185.6
72.5°	286.6	245.9	187.8	158.1	148.2
75°	238.3	197.6	146.0	120.8	114.2
77.5°	187.8	152.6	108.7	91.1	88.9
80°	139.4	107.6	74.7	71.4	70.3
82.5°	97.7	69.2	53.8	51.6	50.5
85°	59.3	37.3	34.0	31.8	31.8
87.5°	25.3	16.5	15.4	14.3	15.4
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	20.19	21.75	20.55	22.07	22.38	18.22	19.78	18.58	20.10	20.41
	3H	21.96	23.37	22.33	23.69	24.05	19.47	20.88	19.85	21.21	21.57
	4H	22.62	23.94	23.02	24.29	24.67	19.85	21.17	20.25	21.52	21.90
	6H	23.09	24.32	23.51	24.68	25.07	20.11	21.33	20.52	21.70	22.09
	8H	23.24	24.41	23.67	24.80	25.20	20.20	21.37	20.63	21.76	22.16
	12H	23.34	24.46	23.77	24.84	25.27	20.27	21.38	20.70	21.76	22.19
4H	2H	20.52	21.85	20.92	22.19	22.57	18.91	20.23	19.31	20.58	20.96
	3H	22.49	23.59	22.90	23.99	24.39	20.35	21.45	20.76	21.85	22.25
	4H	23.27	24.26	23.70	24.68	25.12	20.80	21.79	21.23	22.21	22.64
	6H	23.87	24.73	24.32	25.17	25.63	21.15	22.01	21.60	22.46	22.91
	8H	24.06	24.87	24.52	25.31	25.78	21.27	22.08	21.74	22.53	22.99
	12H	24.20	24.92	24.68	25.40	25.87	21.37	22.10	21.85	22.57	23.04
8H	4H	23.37	24.17	23.83	24.62	25.08	21.11	21.92	21.58	22.37	22.83
	6H	24.04	24.71	24.53	25.20	25.67	21.55	22.21	22.04	22.70	23.18
	8H	24.28	24.88	24.79	25.39	25.88	21.73	22.33	22.24	22.83	23.32
	12H	24.48	25.01	24.98	25.50	26.06	21.88	22.41	22.39	22.90	23.47
12H	4H	23.36	24.08	23.84	24.56	25.03	21.15	21.88	21.63	22.35	22.82
	6H	24.03	24.63	24.54	25.14	25.62	21.60	22.20	22.11	22.71	23.19
	8H	24.31	24.84	24.82	25.33	25.89	21.83	22.36	22.34	22.85	23.41