

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: P243477

Luminaire Tested: S124DRP-H1195D930-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P243477
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-84)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124DRP-H1195D930-X4F0-XX-UDD-F-W
Description: DEFINE 4 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 3000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

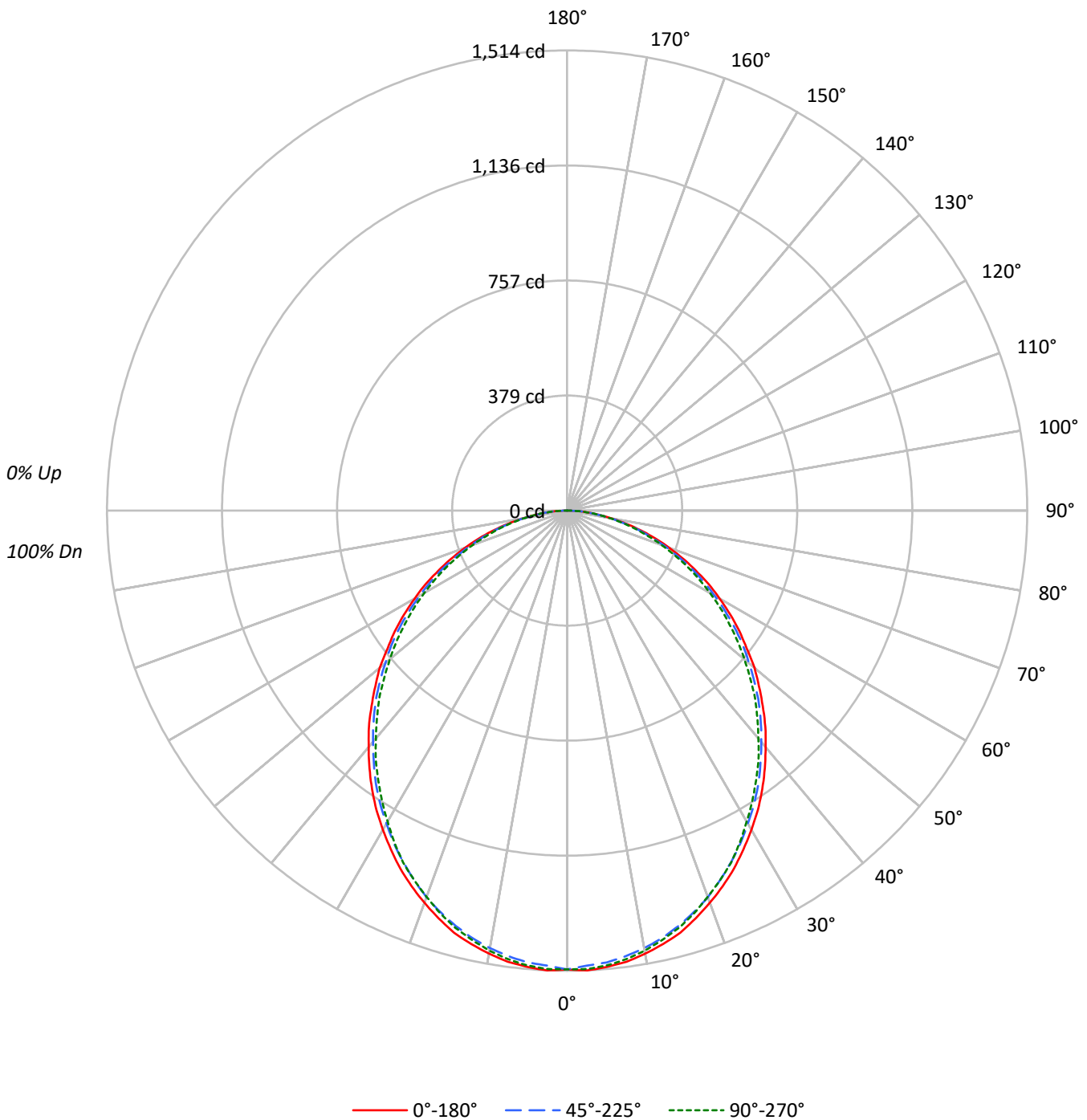
Lumens per Lamp: N/A
Luminaire Lumens: 3886.1 lumens
Efficiency: N/A
Efficacy: 103.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.3
Luminous Opening: Rectangular (W 0.31' x L: 3.88' x H: 0')
CIE Type: Direct

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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	109	104	100	96	106	102	98	95	98	95	92	94	91	89	90	88	86	84
2	99	91	84	79	97	89	83	78	86	80	76	82	78	74	79	76	73	70
3	91	80	72	66	88	79	71	65	76	69	64	73	67	63	70	66	62	60
4	83	71	63	56	81	70	62	56	67	60	55	65	59	54	63	58	53	51
5	77	64	55	48	74	63	54	48	61	53	48	59	52	47	57	51	47	44
6	71	58	49	42	69	57	48	42	55	47	42	53	46	41	52	46	41	39
7	66	52	44	38	64	51	43	37	50	43	37	48	42	37	47	41	37	35
8	61	48	39	34	60	47	39	33	46	38	33	45	38	33	43	37	33	31
9	57	44	36	30	56	43	36	30	42	35	30	41	35	30	40	34	30	28
10	54	41	33	28	52	40	33	27	39	32	27	38	32	27	37	31	27	25

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13418	13418	13418
5°	13448	13316	13404
10°	13359	13192	13270
15°	13236	13022	13078
20°	12990	12804	12792
25°	12745	12517	12529
30°	12443	12204	12128
35°	12143	11902	11755
40°	11787	11531	11359
45°	11442	11209	10993
50°	11125	10803	10531
55°	10716	10431	10107
60°	10306	9957	9652
65°	9816	9482	9170
70°	9289	8875	8587
75°	8562	8225	7971
80°	7545	7417	7233
85°	6639	6639	6517

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 11442 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	142.3	3.7
10°-20°	401.3	10.3
20°-30°	590.9	15.2
30°-40°	687.5	17.7
40°-50°	687.8	17.7
50°-60°	601.5	15.5
60°-70°	446.8	11.5
70°-80°	254.5	6.6
80°-90°	73.3	1.9
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°	1134.5	29.2
0°-40°	1822.0	46.9
0°-60°	3111.4	80.1
0°-90°	3886.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3886.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1510	1510	1510	1510	1510	
5°	1507	1505	1492	1503	1502	143
15°	1438	1431	1415	1424	1421	405
25°	1300	1293	1276	1280	1277	598
35°	1119	1109	1097	1087	1083	700
45°	910	906	892	878	874	703
55°	692	687	673	658	652	618
65°	467	463	451	441	436	463
75°	249	244	240	235	232	264
85°	65	64	65	63	64	75
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1509.5	1509.5	1509.5	1509.5	1509.5
2.5°	1514.5	1510.8	1498.5	1510.8	1509.5
5°	1507.1	1504.6	1492.4	1503.4	1502.2
7.5°	1497.3	1492.4	1478.8	1489.9	1488.7
10°	1480.1	1476.4	1461.6	1472.7	1470.2
12.5°	1460.4	1456.7	1440.8	1449.4	1446.9
15°	1438.3	1430.9	1415.0	1423.6	1421.1
17.5°	1406.4	1401.5	1385.5	1392.9	1389.2
20°	1373.2	1367.1	1353.6	1354.8	1352.3
22.5°	1337.6	1331.4	1315.5	1320.4	1315.5
25°	1299.5	1293.4	1276.2	1279.9	1277.4
27.5°	1256.5	1250.4	1234.4	1235.6	1230.7
30°	1212.3	1204.9	1189.0	1187.7	1181.6
32.5°	1168.1	1160.7	1144.8	1139.8	1133.7
35°	1119.0	1109.1	1096.8	1087.0	1083.3
37.5°	1068.6	1063.7	1045.3	1039.1	1034.2
40°	1015.8	1010.9	993.7	985.1	978.9
42.5°	965.4	959.3	943.3	931.0	926.1
45°	910.2	906.5	891.7	878.2	874.5
47.5°	856.1	854.9	836.5	822.9	816.8
50°	804.5	797.1	781.2	768.9	761.5
52.5°	744.3	743.1	729.6	713.6	707.5
55°	691.5	686.6	673.1	658.4	652.2
57.5°	636.2	633.8	616.6	604.3	598.2
60°	579.7	574.8	560.1	549.0	542.9
62.5°	525.7	519.6	506.0	495.0	488.9
65°	466.7	463.1	450.8	441.0	436.0
67.5°	411.5	406.6	394.3	385.7	380.8
70°	357.4	350.1	341.5	334.1	330.4
72.5°	303.4	297.2	289.9	285.0	280.0
75°	249.3	244.4	239.5	234.6	232.1
77.5°	197.8	192.8	190.4	189.2	186.7
80°	147.4	144.9	144.9	143.7	141.3
82.5°	104.4	101.9	101.9	101.9	100.7
85°	65.1	63.9	65.1	62.6	63.9
87.5°	30.7	30.7	31.9	30.7	31.9
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	20.32	21.93	20.68	22.25	22.56	19.97	21.59	20.34	21.90	22.21
	3H	22.07	23.53	22.45	23.86	24.22	21.68	23.14	22.06	23.47	23.83
	4H	22.73	24.10	23.13	24.45	24.83	22.33	23.71	22.73	24.05	24.43
	6H	23.20	24.48	23.62	24.84	25.23	22.82	24.09	23.23	24.46	24.85
	8H	23.36	24.57	23.78	24.96	25.36	22.98	24.20	23.41	24.59	24.99
	12H	23.46	24.63	23.89	25.01	25.44	23.10	24.26	23.52	24.64	25.07
4H	2H	20.89	22.27	21.29	22.61	22.99	20.62	21.99	21.01	22.34	22.71
	3H	22.87	24.02	23.28	24.41	24.81	22.55	23.70	22.96	24.10	24.50
	4H	23.65	24.69	24.08	25.11	25.54	23.32	24.36	23.75	24.78	25.21
	6H	24.25	25.16	24.71	25.60	26.06	23.94	24.85	24.39	25.29	25.75
	8H	24.45	25.30	24.91	25.75	26.21	24.15	25.00	24.61	25.44	25.91
	12H	24.60	25.37	25.08	25.84	26.31	24.31	25.07	24.79	25.55	26.02
8H	4H	23.93	24.79	24.39	25.23	25.69	23.64	24.50	24.10	24.94	25.40
	6H	24.65	25.36	25.15	25.85	26.33	24.39	25.09	24.88	25.58	26.06
	8H	24.93	25.56	25.44	26.07	26.55	24.67	25.31	25.18	25.81	26.30
	12H	25.15	25.71	25.66	26.20	26.77	24.91	25.47	25.41	25.96	26.52
12H	4H	23.96	24.73	24.44	25.20	25.67	23.68	24.44	24.16	24.92	25.39
	6H	24.70	25.34	25.21	25.85	26.33	24.45	25.08	24.95	25.59	26.07
	8H	25.03	25.60	25.54	26.09	26.65	24.79	25.35	25.30	25.84	26.40