

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: P242430

Luminaire Tested: S123DRP-S1000D830-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P242430
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-11)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123DRP-S1000D830-X4F0-XX-UDD-F-W
Description: DEFINE 3 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

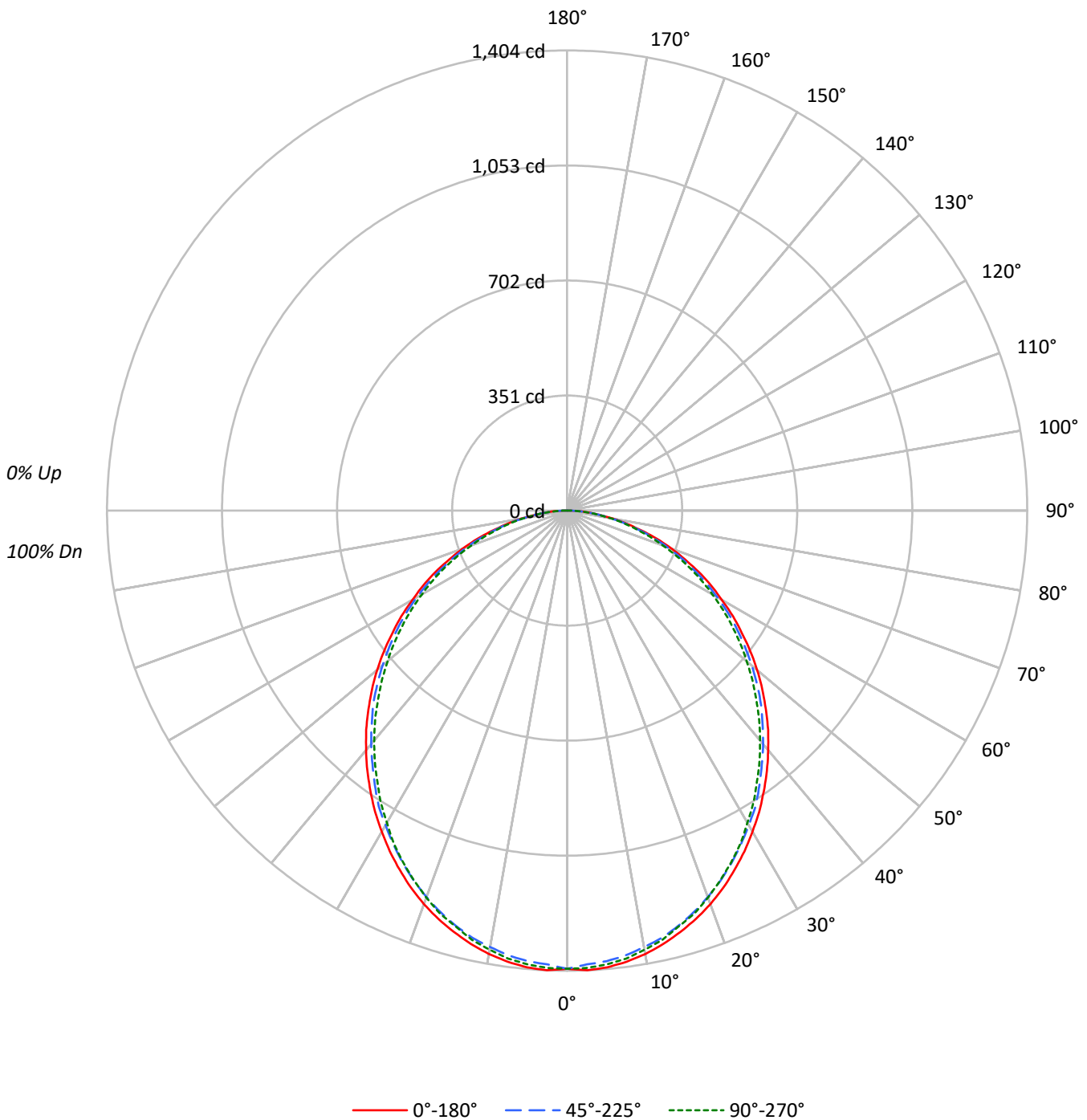
Lumens per Lamp: N/A
Luminaire Lumens: 3638.1 lumens
Efficiency: N/A
Efficacy: 104.5 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.3
Luminous Opening: Rectangular (W 0.23' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 34.8
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	109	104	100	96	106	102	98	95	98	94	92	94	91	89	90	88	86	84					84			
2	99	91	84	79	97	89	83	78	86	80	76	82	78	74	79	76	72	70					70			
3	91	80	72	66	88	79	71	65	76	69	64	73	67	63	70	66	62	59					59			
4	83	71	62	56	81	70	62	55	67	60	55	65	59	54	63	58	53	51					51			
5	76	64	55	48	74	63	54	48	60	53	47	58	52	47	57	51	46	44					44			
6	71	57	49	42	69	56	48	42	55	47	42	53	46	41	51	46	41	39					39			
7	66	52	43	37	64	51	43	37	50	42	37	48	42	37	47	41	36	34					34			
8	61	48	39	33	60	47	39	33	46	38	33	44	38	33	43	37	33	31					31			
9	57	44	36	30	56	43	35	30	42	35	30	41	34	30	40	34	30	28					28			
10	54	40	33	27	52	40	32	27	39	32	27	38	32	27	37	31	27	25					25			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	16944	16944	16944
5°	17024	16790	16907
10°	16910	16643	16747
15°	16713	16457	16487
20°	16481	16187	16203
25°	16172	15866	15834
30°	15831	15511	15393
35°	15474	15136	14941
40°	15102	14720	14492
45°	14691	14341	13990
50°	14279	13871	13487
55°	13743	13385	12980
60°	13200	12822	12412
65°	12720	12204	11825
70°	12014	11500	10990
75°	10978	10584	10135
80°	9898	9479	9396
85°	8692	8358	8025

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 14691 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	131.8	3.6
10°-20°	372.1	10.2
20°-30°	549.6	15.1
30°-40°	641.9	17.6
40°-50°	645.3	17.7
50°-60°	566.8	15.6
60°-70°	422.2	11.6
70°-80°	240.2	6.6
80°-90°	68.3	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°	1053.5	29.0
0°-40°	1695.3	46.6
0°-60°	2907.4	79.9
0°-90°	3638.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3638.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1398	1398	1398	1398	1398	
5°	1399	1393	1380	1392	1390	133
15°	1332	1327	1311	1321	1314	376
25°	1209	1202	1186	1188	1184	557
35°	1046	1038	1023	1016	1010	654
45°	857	852	837	822	816	662
55°	650	649	633	620	614	583
65°	444	438	426	416	412	438
75°	234	230	226	220	216	250
85°	62	60	60	58	58	71
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1397.9	1397.9	1397.9	1397.9	1397.9
2.5°	1403.9	1399.1	1385.9	1397.9	1396.7
5°	1399.1	1393.1	1379.9	1391.9	1389.5
7.5°	1388.3	1382.3	1369.0	1379.9	1378.7
10°	1373.9	1367.8	1352.2	1363.0	1360.6
12.5°	1354.6	1349.8	1335.4	1342.6	1341.4
15°	1331.8	1327.0	1311.4	1321.0	1313.8
17.5°	1306.5	1300.5	1284.9	1292.1	1289.7
20°	1277.7	1270.5	1254.9	1259.7	1256.1
22.5°	1245.2	1238.0	1222.4	1226.0	1221.2
25°	1209.2	1202.0	1186.3	1187.5	1183.9
27.5°	1171.9	1164.7	1147.9	1149.1	1145.5
30°	1131.1	1125.0	1108.2	1108.2	1099.8
32.5°	1090.2	1081.8	1069.8	1061.3	1057.7
35°	1045.7	1038.5	1022.9	1015.7	1009.7
37.5°	1001.2	991.6	976.0	967.6	964.0
40°	954.4	947.2	930.3	920.7	915.9
42.5°	907.5	899.1	882.2	872.6	867.8
45°	857.0	852.2	836.6	822.1	816.1
47.5°	807.7	800.5	786.1	771.7	766.9
50°	757.2	751.2	735.6	722.4	715.2
52.5°	704.4	700.7	683.9	673.1	665.9
55°	650.3	649.1	633.4	620.2	614.2
57.5°	599.8	595.0	583.0	570.9	563.7
60°	544.5	543.3	528.9	518.1	512.0
62.5°	495.2	491.6	477.2	466.4	462.8
65°	443.5	437.5	425.5	415.9	412.3
67.5°	388.2	383.4	373.8	365.4	360.6
70°	339.0	331.7	324.5	316.1	310.1
72.5°	287.3	282.5	274.0	266.8	264.4
75°	234.4	229.6	226.0	220.0	216.4
77.5°	187.5	185.1	180.3	175.5	175.5
80°	141.8	138.2	135.8	134.6	134.6
82.5°	97.4	97.4	97.4	95.0	93.8
85°	62.5	60.1	60.1	57.7	57.7
87.5°	31.3	27.6	26.4	25.2	25.2
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	21.19	22.81	21.56	23.12	23.44	20.87	22.49	21.24	22.81	23.12
	3H	22.96	24.42	23.34	24.75	25.11	22.59	24.05	22.97	24.38	24.74
	4H	23.62	25.00	24.02	25.34	25.72	23.23	24.61	23.63	24.95	25.33
	6H	24.11	25.38	24.52	25.75	26.14	23.72	24.99	24.13	25.36	25.75
	8H	24.26	25.48	24.68	25.87	26.27	23.87	25.09	24.30	25.48	25.88
	12H	24.37	25.53	24.79	25.91	26.34	23.98	25.15	24.41	25.53	25.96
4H	2H	21.77	23.15	22.17	23.49	23.87	21.52	22.90	21.92	23.24	23.62
	3H	23.76	24.92	24.17	25.31	25.71	23.46	24.61	23.86	25.01	25.41
	4H	24.55	25.59	24.98	26.00	26.44	24.22	25.26	24.65	25.67	26.11
	6H	25.16	26.08	25.62	26.52	26.97	24.83	25.74	25.28	26.18	26.64
	8H	25.37	26.22	25.83	26.66	27.13	25.04	25.89	25.50	26.33	26.80
	12H	25.52	26.29	26.00	26.76	27.23	25.19	25.95	25.67	26.43	26.90
8H	4H	24.83	25.69	25.29	26.13	26.59	24.54	25.39	25.00	25.84	26.30
	6H	25.57	26.28	26.06	26.77	27.24	25.27	25.98	25.77	26.47	26.95
	8H	25.84	26.48	26.35	26.99	27.47	25.56	26.19	26.07	26.70	27.18
	12H	26.07	26.63	26.58	27.12	27.69	25.78	26.34	26.29	26.83	27.39
12H	4H	24.86	25.63	25.34	26.10	26.57	24.58	25.34	25.06	25.82	26.29
	6H	25.62	26.26	26.13	26.76	27.25	25.34	25.97	25.84	26.48	26.97
	8H	25.95	26.51	26.46	27.01	27.57	25.68	26.24	26.18	26.73	27.29