

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: P243303

Luminaire Tested: S123DRP-H775D930-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P243303
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-49)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123DRP-H775D930-X4F0-XX-UDD-F-W
Description: DEFINE 3 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 3000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

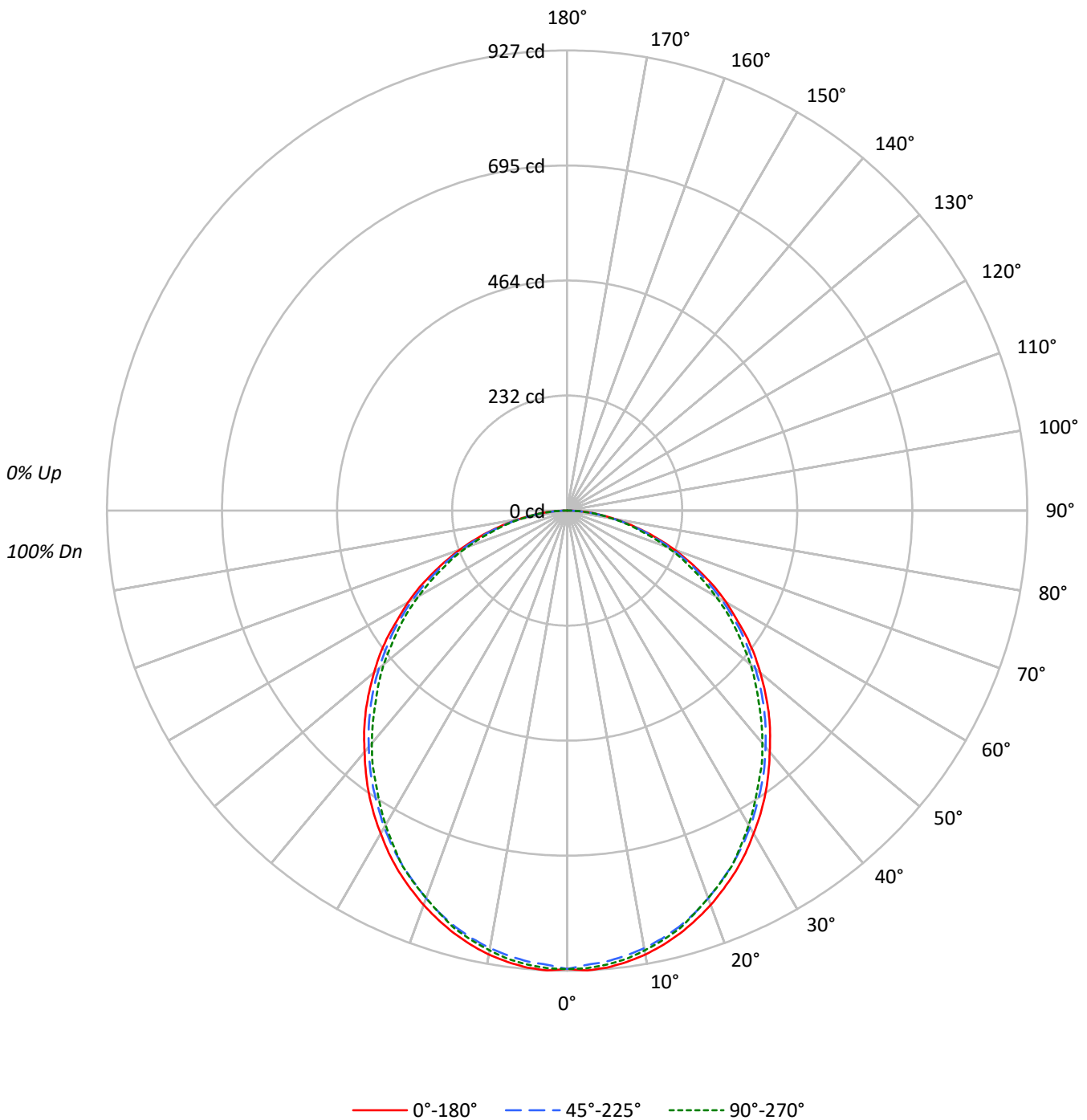
Lumens per Lamp: N/A
Luminaire Lumens: 2442.7 lumens
Efficiency: N/A
Efficacy: 103.5 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.31
Luminous Opening: Rectangular (W 0.23' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 23.6
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	94	97	94	91	94	91	89	90	88	86	84
2	99	91	84	78	96	89	83	77	85	80	76	82	78	74	79	75	72	70
3	90	80	72	65	88	78	71	65	75	69	64	73	67	62	70	65	61	59
4	83	71	62	55	80	70	61	55	67	60	54	65	59	54	63	57	53	51
5	76	63	54	48	74	62	54	48	60	53	47	58	52	47	56	51	46	44
6	70	57	48	42	69	56	48	42	54	47	41	53	46	41	51	45	41	39
7	65	52	43	37	64	51	43	37	50	42	37	48	41	36	47	41	36	34
8	61	47	39	33	59	47	39	33	45	38	33	44	37	33	43	37	32	30
9	57	44	35	30	56	43	35	30	42	35	30	41	34	29	40	34	29	27
10	53	40	32	27	52	40	32	27	39	32	27	38	31	27	37	31	27	25

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11193	11193	11193
5°	11244	11097	11170
10°	11177	11018	11075
15°	11062	10900	10948
20°	10909	10723	10713
25°	10730	10527	10538
30°	10515	10314	10238
35°	10306	10081	9935
40°	10046	9840	9684
45°	9840	9605	9356
50°	9574	9331	9101
55°	9298	9057	8751
60°	8970	8730	8378
65°	8581	8318	7968
70°	8148	7878	7552
75°	7559	7343	6950
80°	6799	6645	6429
85°	6356	6036	5827

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 9840 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	87.1	3.6
10°-20°	246.4	10.1
20°-30°	364.7	14.9
30°-40°	427.7	17.5
40°-50°	432.4	17.7
50°-60°	382.4	15.7
60°-70°	287.2	11.8
70°-80°	165.5	6.8
80°-90°	49.1	2.0
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°	698.2	28.6
0°-40°	1125.9	46.1
0°-60°	1940.8	79.5
0°-90°	2442.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2442.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	923	923	923	923	923	
5°	924	920	912	920	918	88
15°	882	877	869	875	872	248
25°	802	796	787	791	788	369
35°	696	690	681	679	671	435
45°	574	569	560	553	546	442
55°	440	437	429	420	414	393
65°	299	297	290	282	278	296
75°	161	160	157	152	148	171
85°	46	45	43	43	42	51
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	923.4	923.4	923.4	923.4	923.4
2.5°	927.2	924.1	915.8	924.1	922.6
5°	924.1	920.3	912.0	919.6	918.0
7.5°	917.3	913.5	904.3	912.7	911.2
10°	908.1	904.3	895.2	902.1	899.8
12.5°	896.0	892.2	883.0	888.4	886.8
15°	881.5	876.9	868.6	874.7	872.4
17.5°	864.0	860.2	851.1	858.7	851.8
20°	845.7	841.9	831.3	838.1	830.5
22.5°	824.4	819.8	809.2	813.8	809.9
25°	802.3	796.2	787.1	790.9	787.9
27.5°	778.0	771.9	762.8	764.3	758.9
30°	751.3	746.0	736.9	738.4	731.5
32.5°	724.7	720.1	708.7	708.7	701.9
35°	696.5	690.4	681.3	679.0	671.4
37.5°	666.1	660.7	652.4	648.6	644.0
40°	634.9	631.8	621.9	617.4	612.0
42.5°	605.2	599.8	591.5	585.4	579.3
45°	574.0	569.4	560.3	552.7	545.8
47.5°	541.2	537.4	528.3	519.9	514.6
50°	507.7	504.7	494.8	485.7	482.6
52.5°	475.0	471.2	461.3	452.9	446.8
55°	440.0	436.9	428.6	420.2	414.1
57.5°	402.7	402.7	393.6	385.9	381.4
60°	370.0	366.2	360.1	351.7	345.6
62.5°	335.7	333.4	325.0	316.7	312.1
65°	299.2	296.9	290.0	282.4	277.8
67.5°	263.4	262.6	256.5	250.4	247.4
70°	229.9	228.4	222.3	216.2	213.1
72.5°	195.6	194.1	188.8	183.5	179.7
75°	161.4	159.9	156.8	152.2	148.4
77.5°	127.9	127.9	124.1	122.6	121.0
80°	97.4	96.7	95.2	93.6	92.1
82.5°	70.0	69.3	67.7	67.0	67.0
85°	45.7	44.9	43.4	42.6	41.9
87.5°	23.6	22.1	21.3	19.8	19.0
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	19.84	21.47	20.21	21.78	22.10	19.53	21.16	19.90	21.47	21.79
	3H	21.64	23.11	22.02	23.44	23.80	21.29	22.76	21.66	23.08	23.44
	4H	22.32	23.70	22.72	24.05	24.43	21.94	23.32	22.33	23.67	24.04
	6H	22.81	24.10	23.23	24.46	24.85	22.44	23.72	22.85	24.08	24.48
	8H	22.98	24.21	23.41	24.60	25.00	22.61	23.83	23.03	24.22	24.62
	12H	23.11	24.28	23.53	24.66	25.09	22.73	23.90	23.16	24.28	24.71
4H	2H	20.43	21.82	20.83	22.17	22.54	20.19	21.57	20.59	21.92	22.29
	3H	22.46	23.62	22.87	24.02	24.42	22.16	23.32	22.57	23.72	24.12
	4H	23.27	24.32	23.70	24.73	25.17	22.94	23.99	23.37	24.40	24.84
	6H	23.90	24.82	24.35	25.26	25.71	23.57	24.49	24.02	24.93	25.39
	8H	24.12	24.98	24.58	25.42	25.88	23.79	24.65	24.25	25.09	25.56
	12H	24.29	25.06	24.77	25.54	26.01	23.96	24.73	24.44	25.21	25.68
8H	4H	23.56	24.42	24.02	24.87	25.33	23.27	24.13	23.73	24.58	25.04
	6H	24.32	25.03	24.81	25.52	26.00	24.03	24.75	24.52	25.23	25.71
	8H	24.61	25.26	25.12	25.76	26.25	24.33	24.97	24.84	25.48	25.96
	12H	24.87	25.44	25.38	25.93	26.49	24.58	25.15	25.08	25.64	26.20
12H	4H	23.59	24.37	24.07	24.84	25.31	23.31	24.09	23.79	24.56	25.03
	6H	24.37	25.02	24.88	25.52	26.01	24.10	24.74	24.60	25.25	25.73
	8H	24.73	25.30	25.24	25.79	26.35	24.45	25.02	24.96	25.51	26.07