

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: P243284

Luminaire Tested: S123DRP-H775D927-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P243284
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-H775D927-X4F0-XX-UDD-F-W
Description: DEFINE 3 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 2700K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

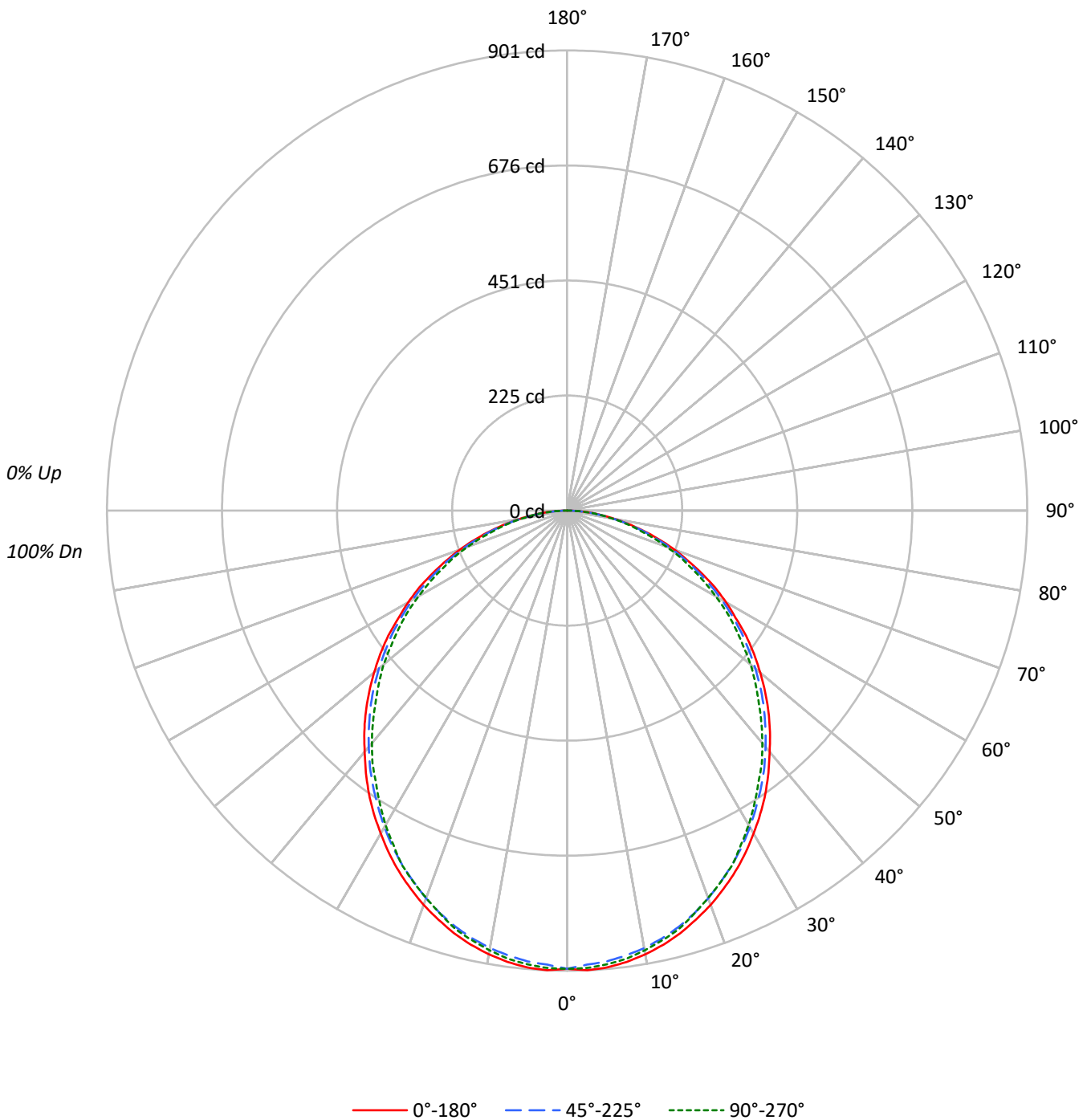
Lumens per Lamp: N/A
Luminaire Lumens: 2373.5 lumens
Efficiency: N/A
Efficacy: 100.6 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.31
Luminous Opening: Rectangular (W 0.23' x L: 3.88' x H: 0')
CIE Type: Direct

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°	10875	10875	10875
5°	10925	10782	10853
10°	10861	10706	10761
15°	10748	10590	10636
20°	10599	10419	10410
25°	10427	10229	10238
30°	10217	10021	9949
35°	10015	9796	9654
40°	9761	9562	9410
45°	9560	9332	9090
50°	9302	9067	8842
55°	9034	8800	8504
60°	8715	8482	8141
65°	8338	8082	7744
70°	7917	7655	7340
75°	7343	7137	6753
80°	6610	6457	6247
85°	6175	5869	5660

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 9560 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	84.6	3.6
10°-20°	239.4	10.1
20°-30°	354.4	14.9
30°-40°	415.6	17.5
40°-50°	420.2	17.7
50°-60°	371.6	15.7
60°-70°	279.1	11.8
70°-80°	160.9	6.8
80°-90°	47.7	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°	678.4	28.6
0°-40°	1094.0	46.1
0°-60°	1885.8	79.5
0°-90°	2373.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2373.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	897	897	897	897	897	
5°	898	894	886	894	892	85
15°	856	852	844	850	848	241
25°	780	774	765	768	766	359
35°	677	671	662	660	652	423
45°	558	553	544	537	530	430
55°	428	425	416	408	402	382
65°	291	288	282	274	270	288
75°	157	155	152	148	144	166
85°	44	44	42	41	41	50
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	897.2	897.2	897.2	897.2	897.2
2.5°	900.9	897.9	889.8	897.9	896.5
5°	897.9	894.2	886.1	893.5	892.0
7.5°	891.3	887.6	878.7	886.8	885.4
10°	882.4	878.7	869.8	876.5	874.3
12.5°	870.6	866.9	858.0	863.2	861.7
15°	856.5	852.1	843.9	849.9	847.6
17.5°	839.5	835.8	826.9	834.3	827.7
20°	821.7	818.0	807.7	814.3	807.0
22.5°	801.0	796.6	786.2	790.7	787.0
25°	779.6	773.7	764.8	768.5	765.5
27.5°	755.9	750.0	741.1	742.6	737.4
30°	730.0	724.9	716.0	717.5	710.8
32.5°	704.1	699.7	688.6	688.6	682.0
35°	676.8	670.9	662.0	659.8	652.4
37.5°	647.2	642.0	633.9	630.2	625.7
40°	616.9	613.9	604.3	599.9	594.7
42.5°	588.0	582.8	574.7	568.8	562.9
45°	557.7	553.3	544.4	537.0	530.3
47.5°	525.9	522.2	513.3	505.2	500.0
50°	493.3	490.4	480.8	471.9	468.9
52.5°	461.5	457.8	448.2	440.1	434.2
55°	427.5	424.6	416.4	408.3	402.4
57.5°	391.3	391.3	382.4	375.0	370.6
60°	359.5	355.8	349.9	341.7	335.8
62.5°	326.2	324.0	315.8	307.7	303.3
65°	290.7	288.5	281.8	274.4	270.0
67.5°	255.9	255.2	249.3	243.3	240.4
70°	223.4	221.9	216.0	210.1	207.1
72.5°	190.1	188.6	183.4	178.3	174.6
75°	156.8	155.3	152.4	147.9	144.2
77.5°	124.3	124.3	120.6	119.1	117.6
80°	94.7	93.9	92.5	91.0	89.5
82.5°	68.0	67.3	65.8	65.1	65.1
85°	44.4	43.6	42.2	41.4	40.7
87.5°	22.9	21.4	20.7	19.2	18.5
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	19.74	21.37	20.11	21.68	22.00	19.43	21.06	19.80	21.37	21.69
	3H	21.54	23.01	21.92	23.34	23.70	21.19	22.66	21.56	22.98	23.34
	4H	22.22	23.60	22.62	23.95	24.33	21.84	23.22	22.23	23.57	23.94
	6H	22.71	24.00	23.13	24.36	24.75	22.34	23.62	22.75	23.99	24.38
	8H	22.88	24.11	23.31	24.50	24.90	22.51	23.73	22.93	24.12	24.52
	12H	23.01	24.18	23.44	24.56	24.99	22.63	23.80	23.06	24.19	24.61
4H	2H	20.33	21.72	20.73	22.07	22.44	20.09	21.47	20.49	21.82	22.20
	3H	22.36	23.52	22.77	23.92	24.32	22.06	23.22	22.47	23.62	24.02
	4H	23.17	24.22	23.60	24.63	25.07	22.84	23.89	23.27	24.31	24.74
	6H	23.80	24.72	24.25	25.16	25.61	23.47	24.39	23.92	24.83	25.29
	8H	24.02	24.88	24.48	25.32	25.78	23.69	24.55	24.15	24.99	25.46
	12H	24.19	24.96	24.67	25.44	25.91	23.86	24.63	24.34	25.11	25.58
8H	4H	23.46	24.32	23.92	24.77	25.23	23.17	24.04	23.64	24.48	24.94
	6H	24.22	24.93	24.71	25.42	25.90	23.93	24.65	24.42	25.14	25.61
	8H	24.51	25.16	25.02	25.66	26.15	24.23	24.87	24.74	25.38	25.86
	12H	24.77	25.34	25.28	25.83	26.39	24.48	25.05	24.98	25.54	26.10
12H	4H	23.49	24.27	23.97	24.74	25.21	23.21	23.99	23.69	24.46	24.93
	6H	24.27	24.92	24.78	25.42	25.91	24.00	24.64	24.51	25.15	25.63
	8H	24.63	25.20	25.13	25.69	26.25	24.36	24.92	24.86	25.41	25.98