

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P930068

Luminaire Tested: DFN2DS-HX2F0-030DS930-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930068
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P333882)
Test Lab: INNOVATION CENTER
Issue Date: 11/20/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DS-HX2F0-030DS930-RLL
Description: 2 foot, Hexagon Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

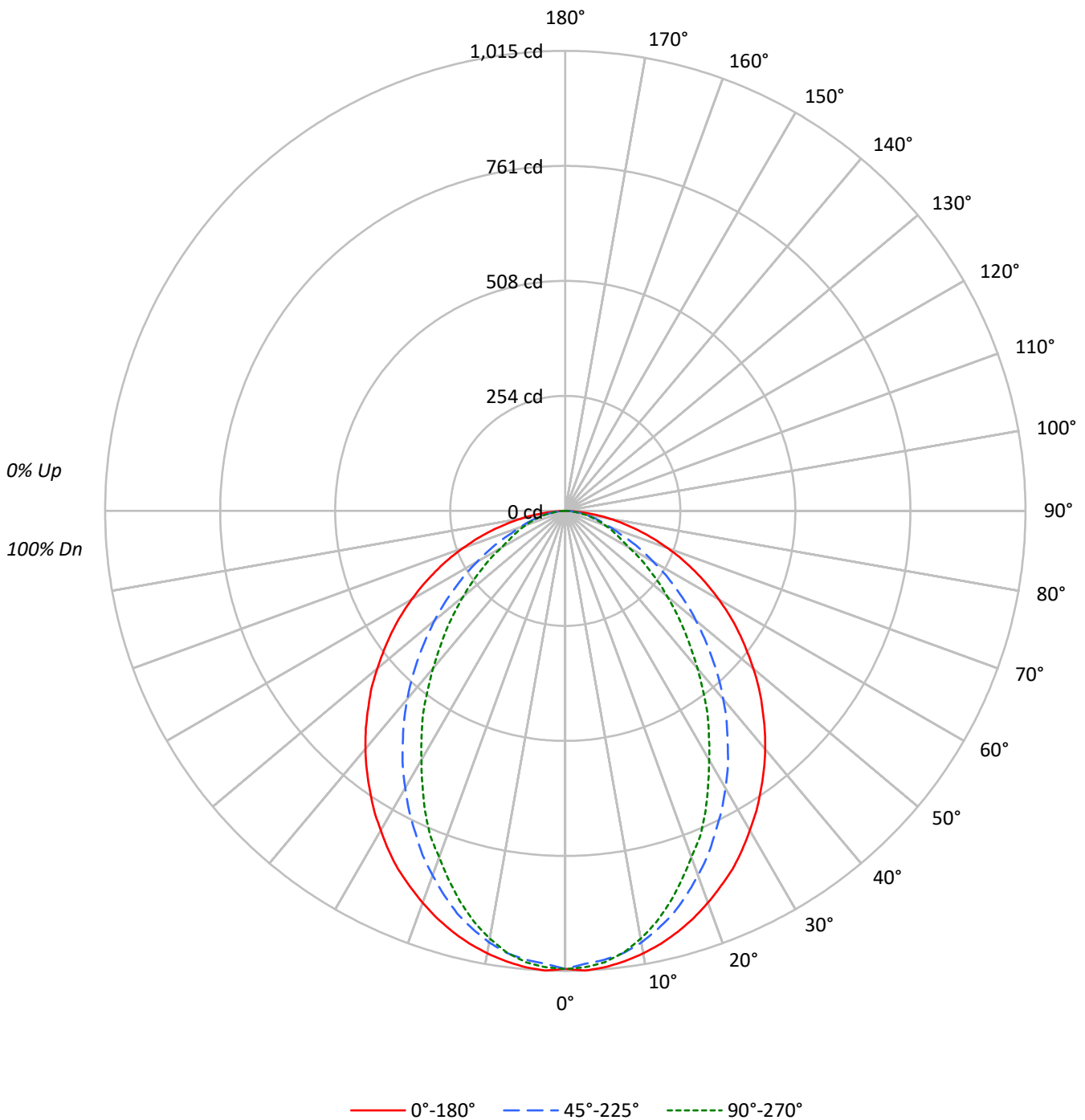
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2078.2 lumens
Efficiency: N/A
Efficacy: 75.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 2.3' x L: 1.99' x H: 0')
CIE Type: Direct

Input Watts (W): 27.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9951
Total Harmonic Distortion (THDi): 0.07
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	0
RCR																					
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	102	102	102	100
1	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	88	88	88	86
2	101	94	87	82	98	92	86	81	88	83	79	85	81	78	82	79	76	76	76	76	74
3	93	83	76	70	90	82	75	69	79	73	68	76	71	67	74	69	66	66	66	66	64
4	86	75	66	60	83	73	66	60	71	64	59	69	63	58	66	62	57	57	57	57	55
5	79	67	59	53	77	66	58	52	64	57	52	62	56	51	60	55	51	51	51	51	49
6	74	61	53	47	72	60	52	46	58	51	46	57	50	46	55	50	45	45	45	45	43
7	68	56	47	42	67	55	47	42	53	46	41	52	46	41	51	45	41	41	41	41	39
8	64	51	43	38	62	51	43	37	49	42	37	48	42	37	47	41	37	37	37	37	35
9	60	47	39	34	59	47	39	34	46	39	34	44	38	34	44	38	34	34	34	34	32
10	56	44	36	31	55	43	36	31	42	36	31	41	35	31	41	35	31	31	31	31	29

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2381	2381	2381
5°	2390	2351	2364
10°	2372	2313	2293
15°	2344	2244	2179
20°	2307	2146	2038
25°	2268	2035	1902
30°	2214	1921	1727
35°	2162	1797	1573
40°	2110	1668	1395
45°	2048	1524	1234
50°	1985	1378	1076
55°	1919	1220	924
60°	1844	1056	767
65°	1759	887	699
70°	1657	730	642
75°	1531	666	600
80°	1353	594	547
85°	1062	470	470

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2048 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	94.7	4.6
10°-20°	260.0	12.5
20°-30°	365.0	17.6
30°-40°	397.9	19.1
40°-50°	365.7	17.6
50°-60°	287.2	13.8
60°-70°	186.9	9.0
70°-80°	96.2	4.6
80°-90°	24.6	1.2
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°	719.7	34.6
0°-40°	1117.6	53.8
0°-60°	1770.5	85.2
0°-90°	2078.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2078.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1010	1010	1010	1010	1010	
5°	1010	1006	994	1002	1000	96
15°	961	951	920	903	894	271
25°	872	843	783	745	732	401
35°	752	705	625	567	547	471
45°	615	553	457	392	370	475
55°	467	396	297	242	225	418
65°	316	241	159	128	125	313
75°	168	104	73	67	66	178
85°	39	20	17	17	17	47
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1010.5	1010.5	1010.5	1010.5	1010.5
2.5°	1015.1	1010.5	1000.4	1009.6	1007.8
5°	1010.5	1006.0	994.1	1002.3	999.5
7.5°	1002.3	996.8	984.0	987.6	983.1
10°	991.3	984.9	966.7	963.8	958.4
12.5°	977.6	969.4	944.7	939.2	929.1
15°	961.1	951.0	920.0	902.6	893.5
17.5°	941.9	927.3	888.8	868.8	854.1
20°	920.0	901.6	855.9	833.2	813.0
22.5°	896.3	875.1	822.1	791.0	777.3
25°	872.5	843.1	782.8	745.3	731.5
27.5°	844.1	813.0	746.2	703.3	682.2
30°	813.9	779.1	706.0	659.4	634.6
32.5°	784.6	742.5	667.6	612.7	589.8
35°	751.8	705.1	624.6	567.0	546.9
37.5°	719.7	669.4	584.4	521.2	498.5
40°	685.9	631.1	542.3	477.3	453.6
42.5°	651.1	592.7	500.2	432.5	409.7
45°	614.6	553.2	457.3	392.3	370.3
47.5°	579.8	514.9	416.1	351.1	331.1
50°	541.4	476.4	375.9	312.7	293.6
52.5°	503.8	435.3	337.5	277.1	259.7
55°	467.2	395.9	297.1	242.4	225.0
57.5°	429.8	356.6	261.6	210.4	195.7
60°	391.4	318.3	224.0	177.4	162.8
62.5°	354.0	280.8	192.0	148.2	140.9
65°	315.5	241.4	159.1	128.0	125.3
67.5°	279.0	204.8	128.0	112.5	109.7
70°	240.5	169.2	106.0	96.9	93.2
72.5°	203.9	136.2	88.7	81.4	79.5
75°	168.2	104.2	73.2	66.7	65.9
77.5°	132.6	74.0	57.6	54.0	52.1
80°	99.7	53.1	43.8	40.3	40.3
82.5°	69.4	35.7	30.2	28.4	28.4
85°	39.3	20.0	17.4	17.4	17.4
87.5°	14.7	7.3	7.3	6.4	6.4
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	14.25	15.77	14.61	16.08	16.40	10.21	11.73	10.58	12.05	12.36
	3H	16.01	17.38	16.39	17.71	18.07	11.47	12.84	11.85	13.17	13.53
	4H	16.68	17.96	17.08	18.31	18.69	11.98	13.26	12.38	13.61	13.98
	6H	17.17	18.35	17.58	18.72	19.11	12.36	13.54	12.77	13.91	14.30
	8H	17.33	18.46	17.76	18.85	19.25	12.48	13.61	12.91	14.00	14.40
	12H	17.44	18.52	17.87	18.90	19.33	12.56	13.64	12.99	14.02	14.45
4H	2H	14.35	15.63	14.75	15.98	16.36	10.91	12.19	11.31	12.53	12.91
	3H	16.29	17.35	16.70	17.75	18.15	12.35	13.41	12.76	13.81	14.21
	4H	17.03	17.99	17.47	18.41	18.85	12.95	13.90	13.38	14.32	14.76
	6H	17.63	18.46	18.08	18.90	19.36	13.44	14.27	13.89	14.71	15.17
	8H	17.84	18.62	18.30	19.06	19.53	13.60	14.38	14.06	14.82	15.29
	12H	17.99	18.69	18.48	19.17	19.64	13.72	14.41	14.20	14.89	15.36
8H	4H	17.06	17.84	17.52	18.28	18.75	13.30	14.08	13.76	14.52	14.99
	6H	17.70	18.34	18.19	18.83	19.31	13.89	14.53	14.38	15.02	15.50
	8H	17.95	18.52	18.46	19.03	19.52	14.11	14.69	14.62	15.20	15.68
	12H	18.15	18.66	18.66	19.15	19.72	14.29	14.80	14.80	15.29	15.86
12H	4H	17.04	17.74	17.53	18.22	18.69	13.34	14.04	13.83	14.52	14.99
	6H	17.68	18.25	18.19	18.76	19.25	13.95	14.53	14.47	15.04	15.53
	8H	17.96	18.47	18.47	18.96	19.53	14.23	14.74	14.74	15.23	15.79