

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: P930051

Luminaire Tested: DFN2DS-HX2F0-020DS935-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930051
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P333812)
Test Lab: INNOVATION CENTER
Issue Date: 11/20/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DS-HX2F0-020DS935-FLL
Description: 2 foot, Hexagon Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

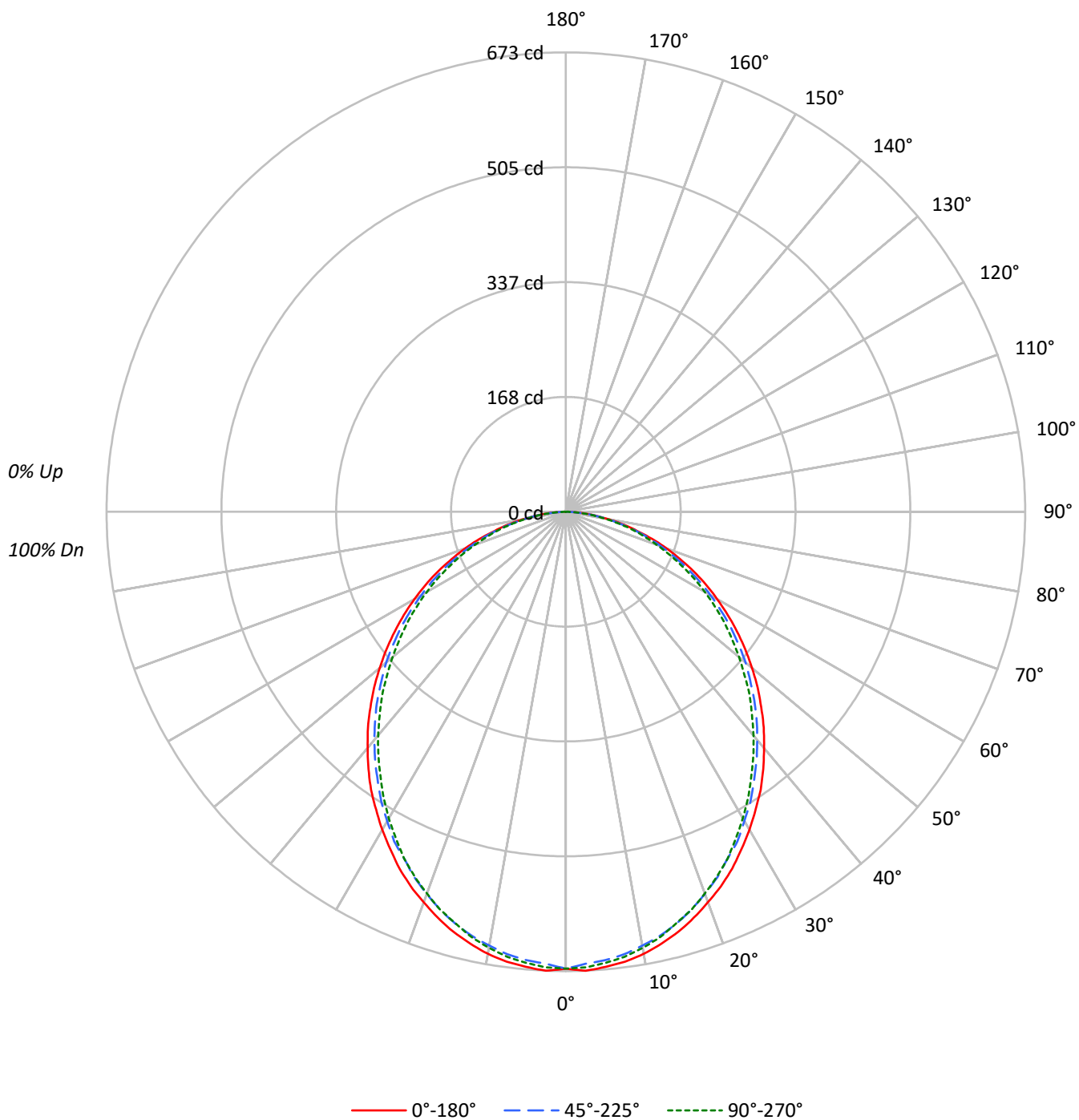
Lumens per Lamp: N/A
Luminaire Lumens: 1702.8 lumens
Efficiency: N/A
Efficacy: 96.8 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 2.3' x L: 1.99' x H: 0')
CIE Type: Direct

Input Watts (W): 17.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9968
Total Harmonic Distortion (THDi): 0.064
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
RW	70	50	30	10	70	50	30	10	50	30	10		50	30	10		50
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102
1	109	104	100	96	106	102	98	95	98	95	92		94	91	89		90
2	99	91	85	79	97	89	83	78	86	81	76		83	78	74		80
3	91	80	72	66	88	79	71	65	76	69	64		73	68	63		71
4	83	71	63	56	81	70	62	56	68	61	55		65	59	54		63
5	77	64	55	49	75	63	55	48	61	53	48		59	52	47		57
6	71	58	49	43	69	57	48	42	55	48	42		53	47	42		52
7	66	52	44	38	64	52	43	38	50	43	37		49	42	37		47
8	61	48	40	34	60	47	39	34	46	39	33		45	38	33		44
9	57	44	36	30	56	43	36	30	42	35	30		41	35	30		40
10	54	41	33	28	53	40	33	28	39	32	27		38	32	27		37

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1577	1577	1577
5°	1583	1560	1569
10°	1574	1544	1552
15°	1554	1524	1523
20°	1526	1494	1493
25°	1499	1457	1457
30°	1464	1423	1411
35°	1431	1383	1362
40°	1390	1342	1316
45°	1349	1302	1270
50°	1305	1260	1215
55°	1258	1211	1166
60°	1207	1153	1110
65°	1152	1094	1044
70°	1082	1024	975
75°	984	942	919
80°	874	847	803
85°	711	679	608

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1349 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	63.0	3.7
10°-20°	177.2	10.4
20°-30°	260.5	15.3
30°-40°	302.5	17.8
40°-50°	302.1	17.7
50°-60°	263.4	15.5
60°-70°	194.7	11.4
70°-80°	110.2	6.5
80°-90°	29.1	1.7
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°	500.7	29.4
0°-40°	803.2	47.2
0°-60°	1368.8	80.4
0°-90°	1702.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1702.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	669	669	669	669	669	
5°	669	667	660	665	664	64
15°	637	633	625	628	624	179
25°	577	572	560	562	560	265
35°	498	491	481	477	474	311
45°	405	400	391	384	381	312
55°	306	302	295	287	284	274
65°	207	203	196	190	187	204
75°	108	107	104	100	101	115
85°	26	26	25	23	22	31
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	669.3	669.3	669.3	669.3	669.3
2.5°	673.1	669.9	662.8	669.3	668.0
5°	669.3	666.8	659.6	664.8	663.5
7.5°	664.8	660.9	653.9	659.0	657.7
10°	657.7	653.3	645.5	650.6	648.7
12.5°	648.0	644.2	636.5	639.7	638.4
15°	637.1	633.3	624.9	627.5	624.3
17.5°	623.6	619.8	611.4	614.6	611.4
20°	608.8	604.9	595.9	597.9	595.3
22.5°	594.0	588.2	579.8	579.8	578.5
25°	576.6	571.5	560.5	561.8	560.5
27.5°	557.3	552.8	544.5	542.6	539.3
30°	538.0	532.9	523.2	521.3	518.7
32.5°	517.4	513.6	503.3	499.4	496.8
35°	497.5	491.1	480.7	476.9	473.6
37.5°	475.0	469.1	458.8	454.3	451.1
40°	451.8	446.6	436.3	430.6	427.9
42.5°	429.2	424.1	413.8	407.4	403.5
45°	404.8	400.3	390.6	383.6	381.0
47.5°	381.0	376.5	366.2	359.0	355.3
50°	355.9	352.7	343.7	334.6	331.4
52.5°	331.4	326.9	318.5	311.5	307.0
55°	306.3	302.5	294.7	287.1	283.8
57.5°	281.2	278.0	269.6	262.0	259.3
60°	256.1	253.6	244.6	237.4	235.6
62.5°	231.7	227.1	220.8	214.3	211.7
65°	206.6	202.7	196.3	190.5	187.3
67.5°	180.9	177.6	171.8	167.4	164.8
70°	157.0	154.5	148.6	144.1	141.6
72.5°	132.6	130.0	126.8	122.3	120.4
75°	108.1	106.9	103.5	99.8	101.0
77.5°	86.3	83.7	82.3	80.4	78.5
80°	64.4	63.7	62.4	60.5	59.2
82.5°	43.8	43.8	43.2	40.6	40.6
85°	26.3	25.7	25.1	23.1	22.5
87.5°	11.6	10.3	9.0	7.1	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	12.86	14.48	13.23	14.79	15.10	12.42	14.03	12.79	14.35	14.66
	3H	14.61	16.07	14.99	16.40	16.76	14.13	15.58	14.50	15.91	16.27
	4H	15.26	16.63	15.66	16.98	17.35	14.77	16.14	15.17	16.48	16.86
	6H	15.73	17.00	16.14	17.36	17.76	15.23	16.50	15.64	16.86	17.25
	8H	15.87	17.09	16.30	17.47	17.87	15.37	16.58	15.80	16.97	17.37
	12H	15.96	17.12	16.39	17.51	17.93	15.45	16.61	15.88	16.99	17.42
4H	2H	13.42	14.79	13.82	15.14	15.52	13.07	14.44	13.47	14.79	15.17
	3H	15.40	16.55	15.81	16.94	17.34	14.99	16.14	15.40	16.54	16.94
	4H	16.18	17.21	16.61	17.63	18.06	15.75	16.79	16.19	17.20	17.64
	6H	16.77	17.68	17.23	18.12	18.58	16.34	17.25	16.80	17.69	18.14
	8H	16.96	17.81	17.42	18.25	18.72	16.53	17.37	16.99	17.81	18.28
	12H	17.10	17.86	17.58	18.33	18.80	16.64	17.40	17.12	17.88	18.35
8H	4H	16.45	17.30	16.91	17.74	18.20	16.08	16.92	16.54	17.37	17.83
	6H	17.17	17.87	17.66	18.36	18.83	16.78	17.49	17.28	17.97	18.45
	8H	17.42	18.06	17.93	18.56	19.05	17.03	17.66	17.54	18.17	18.66
	12H	17.62	18.18	18.13	18.67	19.23	17.21	17.77	17.72	18.26	18.82
12H	4H	16.48	17.24	16.96	17.71	18.18	16.11	16.87	16.59	17.35	17.82
	6H	17.21	17.84	17.72	18.35	18.84	16.84	17.47	17.35	17.98	18.47
	8H	17.52	18.08	18.03	18.57	19.13	17.15	17.70	17.65	18.20	18.76