

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: P930055

Luminaire Tested: DFN2DS-HX2F0-020DS950-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930055
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-HX2F0-020DS950-FLL
Description: 2 foot, Hexagon Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

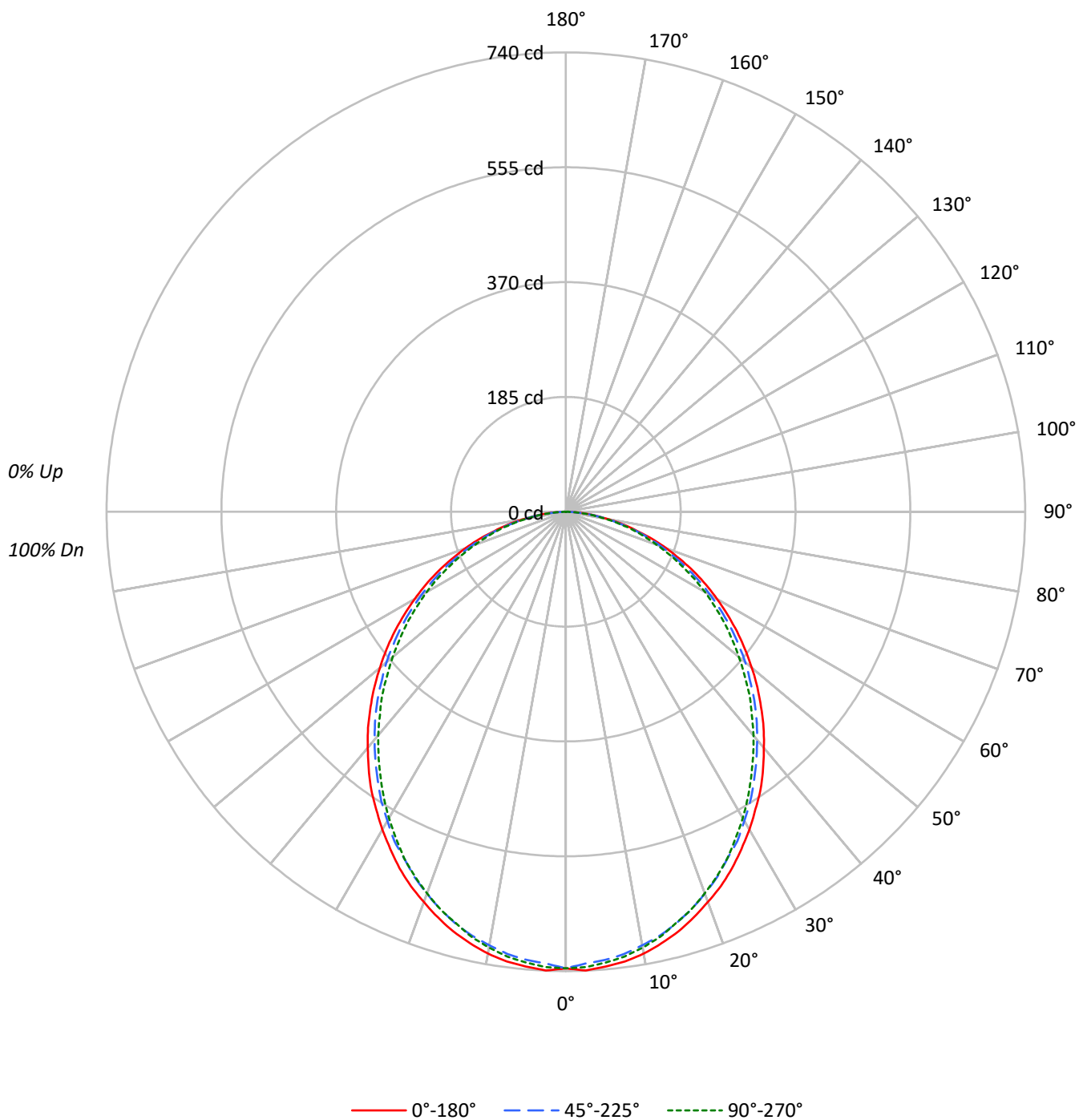
Lumens per Lamp: N/A
Luminaire Lumens: 1871.1 lumens
Efficiency: N/A
Efficacy: 106.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 2.3' x L: 1.99' x H: 0')
CIE Type: Direct

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°	1733	1733	1733
5°	1739	1714	1724
10°	1729	1697	1705
15°	1708	1675	1673
20°	1677	1642	1640
25°	1647	1601	1601
30°	1608	1564	1550
35°	1572	1520	1497
40°	1527	1475	1446
45°	1482	1430	1395
50°	1433	1384	1335
55°	1383	1331	1281
60°	1326	1267	1220
65°	1266	1203	1147
70°	1189	1125	1072
75°	1081	1036	1010
80°	961	931	882
85°	781	746	670

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1482 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	69.2	3.7
10°-20°	194.8	10.4
20°-30°	286.2	15.3
30°-40°	332.4	17.8
40°-50°	332.0	17.7
50°-60°	289.5	15.5
60°-70°	214.0	11.4
70°-80°	121.1	6.5
80°-90°	32.0	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°	550.2	29.4
0°-40°	882.6	47.2
0°-60°	1504.1	80.4
0°-90°	1871.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1871.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	735	735	735	735	735	
5°	735	733	725	730	729	70
15°	700	696	687	690	686	197
25°	634	628	616	617	616	292
35°	547	540	528	524	520	341
45°	445	440	429	422	419	343
55°	337	332	324	315	312	301
65°	227	223	216	209	206	224
75°	119	118	114	110	111	127
85°	29	28	28	25	25	34
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	735.4	735.4	735.4	735.4	735.4
2.5°	739.7	736.2	728.3	735.4	734.1
5°	735.4	732.7	724.8	730.5	729.1
7.5°	730.5	726.2	718.5	724.2	722.7
10°	722.7	717.8	709.3	714.9	712.8
12.5°	712.1	707.9	699.4	702.9	701.5
15°	700.1	695.9	686.6	689.5	686.0
17.5°	685.2	681.1	671.8	675.3	671.8
20°	669.0	664.7	654.8	657.0	654.1
22.5°	652.7	646.4	637.1	637.1	635.7
25°	633.6	628.0	616.0	617.3	616.0
27.5°	612.4	607.4	598.3	596.2	592.6
30°	591.2	585.5	574.9	572.9	569.9
32.5°	568.5	564.4	553.0	548.8	545.9
35°	546.7	539.6	528.3	524.0	520.4
37.5°	521.9	515.5	504.2	499.2	495.7
40°	496.4	490.7	479.4	473.2	470.2
42.5°	471.6	466.0	454.7	447.6	443.4
45°	444.8	439.9	429.2	421.5	418.6
47.5°	418.6	413.7	402.4	394.5	390.4
50°	391.0	387.5	377.6	367.7	364.2
52.5°	364.2	359.2	350.0	342.3	337.4
55°	336.6	332.4	323.9	315.4	311.8
57.5°	309.0	305.5	296.3	287.8	284.9
60°	281.4	278.7	268.8	260.9	258.8
62.5°	254.6	249.6	242.6	235.5	232.7
65°	227.0	222.7	215.7	209.3	205.8
67.5°	198.7	195.1	188.8	183.9	181.1
70°	172.6	169.7	163.3	158.4	155.6
72.5°	145.7	142.9	139.3	134.4	132.3
75°	118.8	117.5	113.8	109.6	111.0
77.5°	94.8	91.9	90.4	88.4	86.3
80°	70.8	70.0	68.6	66.4	65.0
82.5°	48.1	48.1	47.4	44.6	44.6
85°	28.9	28.3	27.6	25.4	24.8
87.5°	12.8	11.3	9.9	7.8	7.1
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	13.19	14.80	13.56	15.12	15.43	12.75	14.36	13.11	14.67	14.99
	3H	14.94	16.40	15.32	16.72	17.08	14.45	15.91	14.83	16.23	16.59
	4H	15.59	16.96	15.99	17.31	17.68	15.09	16.46	15.49	16.81	17.19
	6H	16.06	17.33	16.47	17.69	18.08	15.56	16.82	15.97	17.19	17.58
	8H	16.20	17.41	16.63	17.80	18.20	15.70	16.91	16.12	17.30	17.70
	12H	16.29	17.45	16.72	17.83	18.26	15.78	16.94	16.21	17.32	17.75
4H	2H	13.75	15.12	14.15	15.47	15.85	13.40	14.77	13.80	15.12	15.49
	3H	15.73	16.87	16.14	17.27	17.67	15.32	16.47	15.73	16.87	17.27
	4H	16.50	17.54	16.94	17.95	18.39	16.08	17.12	16.51	17.53	17.97
	6H	17.10	18.01	17.56	18.45	18.90	16.67	17.57	17.12	18.01	18.47
	8H	17.29	18.14	17.75	18.58	19.05	16.85	17.70	17.31	18.14	18.61
	12H	17.42	18.18	17.90	18.66	19.13	16.97	17.73	17.45	18.21	18.68
8H	4H	16.78	17.62	17.24	18.07	18.53	16.40	17.25	16.86	17.69	18.16
	6H	17.49	18.20	17.99	18.68	19.16	17.11	17.81	17.60	18.30	18.78
	8H	17.75	18.38	18.26	18.89	19.38	17.36	17.99	17.87	18.50	18.98
	12H	17.95	18.51	18.46	19.00	19.56	17.54	18.10	18.04	18.59	19.15
12H	4H	16.80	17.56	17.28	18.04	18.51	16.44	17.20	16.92	17.67	18.14
	6H	17.54	18.17	18.05	18.68	19.16	17.17	17.80	17.68	18.31	18.79
	8H	17.85	18.41	18.36	18.90	19.46	17.47	18.03	17.98	18.52	19.08